MacWEEK

16 January 1990 Vol. 4 No. 2

WRITTEN IN STONE

Desktop publishing five years later: A permanent revolution

See GA in this issue

Also in this issue:

ProductWatch

Magneto-optical drives! The cutting edge in storage technology: Nine units reviewed

News

Tech Analysis
New viruses pose dilemmas for Mac managers and vendors

Real Soon
The Wallaby Laptop System: An innovative, lightweight, portable alternative

LaserWriter
January 1985

PostScript Interpreter
January 1985

Aldus PageMaker
July 1985

Linotronic 100
September 1985

Fontographer
January 1986

TIFF
August 1986

Adobe Illustrator
March 1987

QuarkXPress
March 1987

ImageStudio
November 1987

A Strong Argument For The RasterOps ClearVue/GS Display System.

File Edit Document Page Object Draw
Professional Design Tool Page 1
ClearVue/GS
Professional Design Tool
The RasterOps ClearVue/GS and ClearVue/GS30 display systems are the highest quality gray scale solutions offered for the Macintosh II and SE/30 family of computers. For professional publishing or designer workstation, the ClearVue/GS system provides unequaled image quality with 256 shades of gray. Engineered with such features as a 75 Hz refresh rate and hardware pan and zoom, these systems provide the professional with the tool to improve productivity. RasterOps ClearVue/GS offers high performance and enhanced functionality for a very low price.
Image Quality
The ClearVue/GS and ClearVue/GS30 display systems have a resolution of 1024 x 768 giving the user the ability for accurate on screen proofing. RasterOps is dedicated to the Apple WYSIWYG standard of 72 dpi compared to the non-traditional resolution of 1152 x 832, which is 30% smaller. Combining the features of a paper white screen phosphor, user controllable display parameters and 75 Hz flicker-free refresh, the ClearVue/GS system is ergonomically designed for long term viewing comfort.
Advanced Features
The ClearVue/GS and ClearVue/GS30 display systems offer advanced features that are requirements for business, education, and engineering environments. The systems come standard with hardware pan and zoom allowing immediate 2 and 4 times zooming. The work area can also be expanded by enabling the extended desktop function. This increases your productivity by providing larger document sizes. Multiple gray scale levels of 2, 4, 16 and 256 offer software flexibility. Standard software includes pop-up menus for immediate access to the menu bar from anywhere on the screen.
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Standard Monochrome

Gray scale performance is a luxury you can now afford and a tool you can't afford to be without.

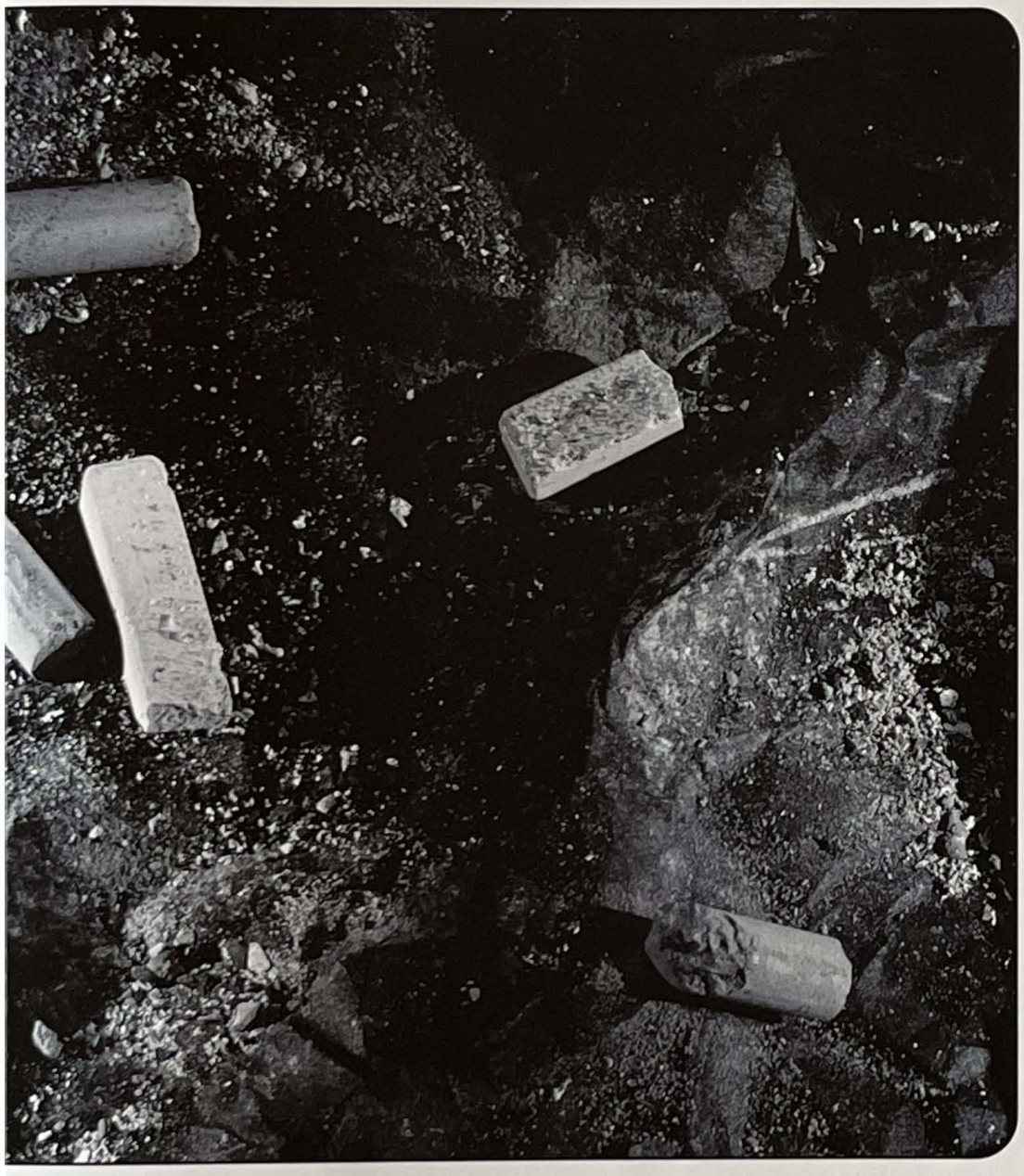
If you are using anything less than 8-bits per pixel, you are not using advanced technology. Image Studio, Digital Darkroom and PageMaker, plus hundreds of other software applications, are based on 8-bit display technology. Monochrome displays do not take advantage of the technological evolution of the Macintosh and third generation software. One bit per pixel just isn't enough.

The ClearVue/GS display lets you see 256 shades of gray with true visual fidelity. What you see on the screen is 100% true to your hard copy output. The other leading gray scale display reduces the image to 92% of your actual output. The ClearVue/GS 19" display has a resolution of 72 dots per inch, an industry standard developed by Apple.

RasterOps' advanced technology gives you the big picture. With the Extended Desktop feature, you can expand your work area. Imagine being able to work on a document up to eight times larger without scrolling. Pop-up menus bring up the menu bar anytime you need it, anywhere on the screen. And the refresh rate of 75 Hz renders the display flicker-free for long term viewing comfort. With built-in hardware Pan and Zoom, you can see the details of your work two or four times larger than the original image and then zoom out with a single keystroke.

e Been Missing.

RasterOps ClearVue/GS



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WITH GA
MacWEEK
16 January 1990 Vol. 4 No. 2 WORKSTATION NEWS

Portable sales lackluster

Dealers confront price resistance

By Pamela Pfiffner and Connie Guglielmo

Cupertino, Calif. — As the interest generated by the Macintosh Portable's much-publicized introduction in September fades, most dealers surveyed by MacWEEK said customer enthusiasm for the long-awaited machine appears to have waned.

Although Apple does not make sales figures available, Dallas-based market research firm Storeboard Inc. surveyed retailers and estimated that unit sales of the Mac Portable were 1,610 in November 1989, the first month for which figures are available.

Apple announced last month that its first-quarter sales for fiscal 1990 would be lower than anticipated, in part because "constraints in the supply" of the Portable's active-matrix screen display would prevent ramping up production. However, CEO John Sculley said in September that supply would not be a problem.

Nonetheless, the unit is selling well at some dealerships. Although he was unable to provide sales figures, Manny Cruz, an account executive with Los Angeles-based S.O.S. Computers, said, "We have a considerable demand for the Portable. We have some back orders, and we expect to get some new stock in soon."

Budd Bieber, sales representative at Computer Tree in DeKalb, Ill., said, "When we get them, we're able to sell them. We're a small dealership, and we've sold four of them so far. For us, that's great."

See Portable, Page 9

Outbound: Have ROM, will travel

REAL SOON

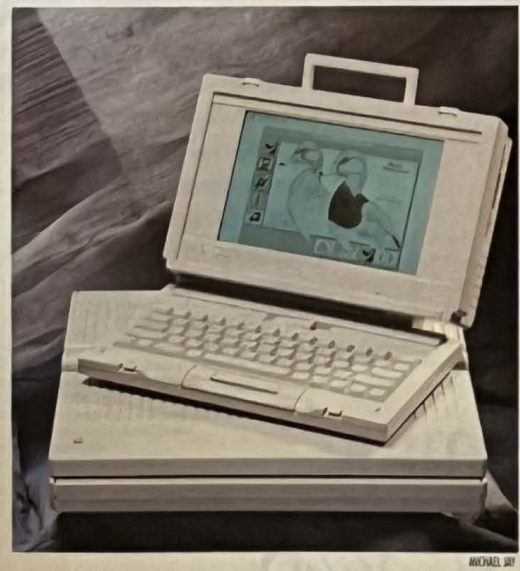
By Raines Cohen

Although there are only about 50 Outbound Laptop Systems in the world, the new machine has already become an object of interest among Mac users. Known as the Wallaby until a recent trademark search yielded a previous claimant, the Outbound is a cleverly designed portable machine that comes to life when you pop the ROM chips from a Mac Plus or SE into the unit.

We worked with a pre-production unit to see what this lighter, less expensive, more portable alternative to Apple's worthy Macintosh Portable delivers.

Outbound Systems Inc. — the name the unit's Boulder, Colo., developer adopted last week — is promoting the Outbound as a Mac expansion device. It must be attached at least once to a Plus or SE for a one-time initialization ritual. Thereafter, since the ROMs are liberated from the box where they normally reside, the Outbound can be used as a stand-alone laptop. At home or office it can be

See Outbound, Page 8



MICHAEL JAY

The Outbound Laptop System, formerly known as the Wallaby, represents a different set of compromises from Apple's Macintosh Portable, trading off some features and expandability to provide a smaller, lighter, less expensive package.

Managers seek immunity from new virus threats

TECH ANALYSIS

By Henry Norr

San Francisco — Not long after Debbie Alsop, a desktop computer specialist at Mentor Graphics Corp. in Beaverton, Ore., took on the responsibility of supporting the company's Macs in late 1988, the nVIR virus "hit hard and heavy" among many of the 600 users at her site.

By dint of a campaign of education, complete with an elaborate desktop-published handbook, and the installation of Vaccine, Disinfectant and other non-commercial utilities on all machines under her supervision, Alsop was soon able to eradicate the epidemic. In fact, she said, the only time she saw viruses between February and last month's holidays was when Vaccine raised an alarm.

But this month Alsop found the mouse on her Mac IIcx behaving

See Virus, Page 9

TOPS bundles InBox 3 with LAN update

By John Battelle

Santa Clara, Calif. — TOPS Inc. ended months of speculation last week when it unveiled not only new versions of its networking and electronic-mail software but also preliminary details of a new relationship with its parent company, Sun Microsystems Inc.

Version 3.0 of TOPS — the networking software — is bundled with InBox 3.0, a new version of the company's electronic-mail software. The new version of TOPS — the company — will come with its own board of directors and a guarantee of autonomy from Sun.

"TOPS' business is very different from Sun's," said Rich Shapero, general manager and vice president of TOPS. "Sun will retain ownership, but we will go forward in a very autonomous fashion."

To clear up any confusion of nomenclature, TOPS has renamed

See TOPS, Page 9

Wingz' span extended to corporate databases

By John Battelle and Edwin Garcia

San Francisco — Introducing a suite of new database and connectivity products, Informix Software Inc. last week moved to position its Wingz spreadsheet as a graphical front end for the presentation and manipulation of information in large corporate databases.

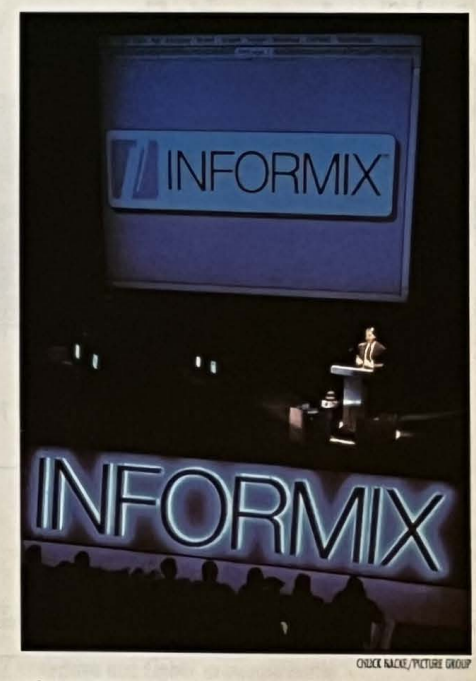
Informix unveiled DataLink, a connectivity language based on Wingz' built-in HyperScript scripting facility. DataLink will allow present and future versions of Wingz to connect directly with Informix's Unix relational database offerings as well as to databases supported by CL/1, Apple's connectivity language.

Informix has promised that Wingz, introduced on the Mac last February, will be delivered on OS/2, Windows, NeXT and many other flavors of Unix by the end of this year (see MacWEEK, Nov. 14, 1989).

DataLink appears in Wingz as a menu item that, when called, provides a point-and-click interface for the retrieval and updating of information in SQL databases.

Informix also shed more light on its deal with Claris Corp., which purchased core Wingz technologies last month (see MacWEEK, Jan. 9). According to Phillip White, Informix CEO, Claris was most interested in HyperScript, which he touted as an emerging industry standard. The relationship with Claris "just signifies that we have great technology," White said.

See Informix, Page 8



CHUCK NACKE/PICTURE GROUP

Informix Software rolled out its new DataLink feature for its Wingz graphical spreadsheet at a combination product unveiling and sales rally in San Francisco last week.

LATE NEWS

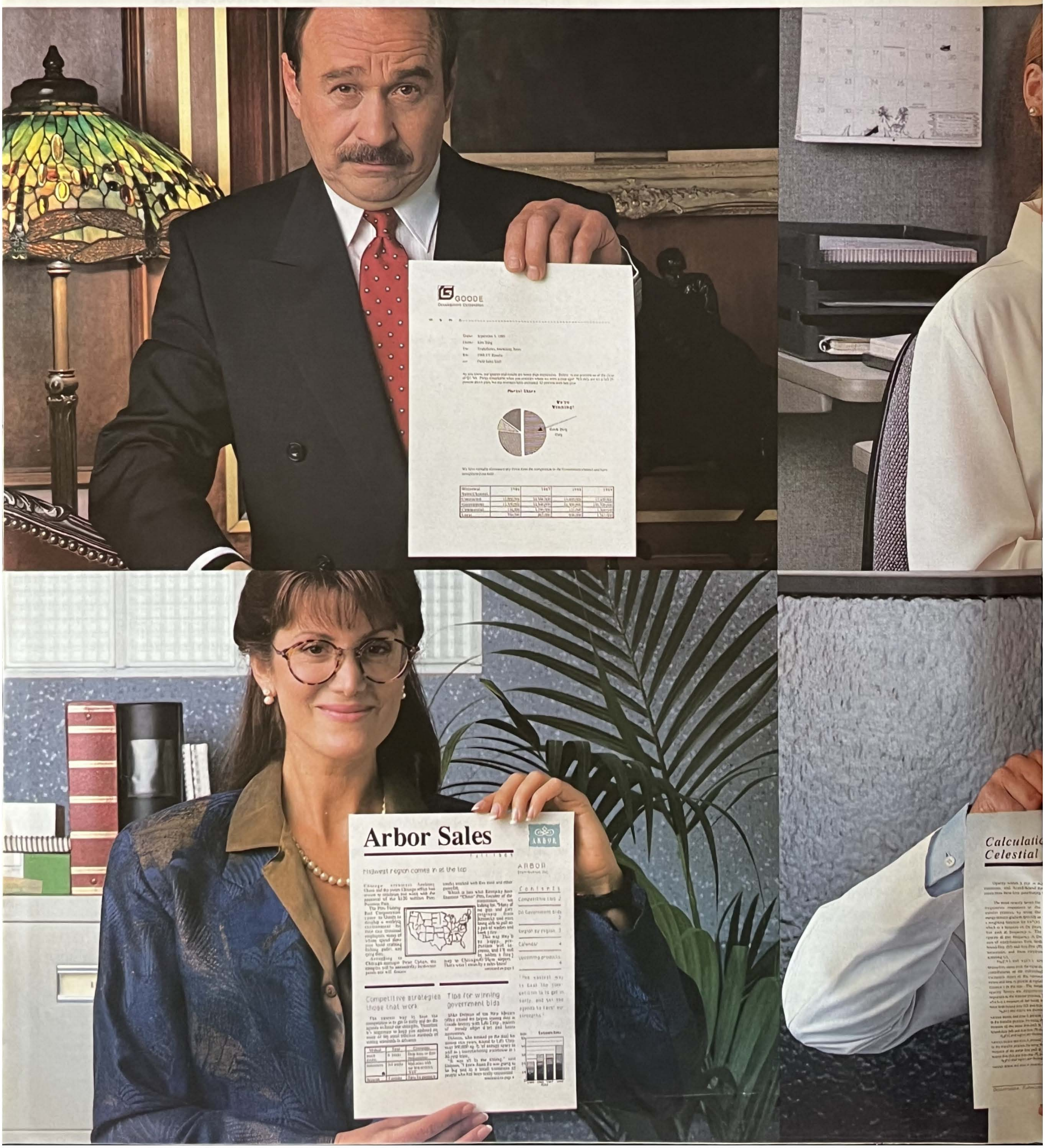
Varityper bolsters PS imagesetter line

East Hanover, N.J. — Varityper Inc. last week unveiled the Series 4000 Image Controller, a configurable modular unit that works with the company's high-resolution PostScript imagesetters and film recorders. Varityper also introduced an automatic toner-replenishing mechanism for its VT600 series, updated its EPICS composition software and announced support for the complete Adobe Type Library. □

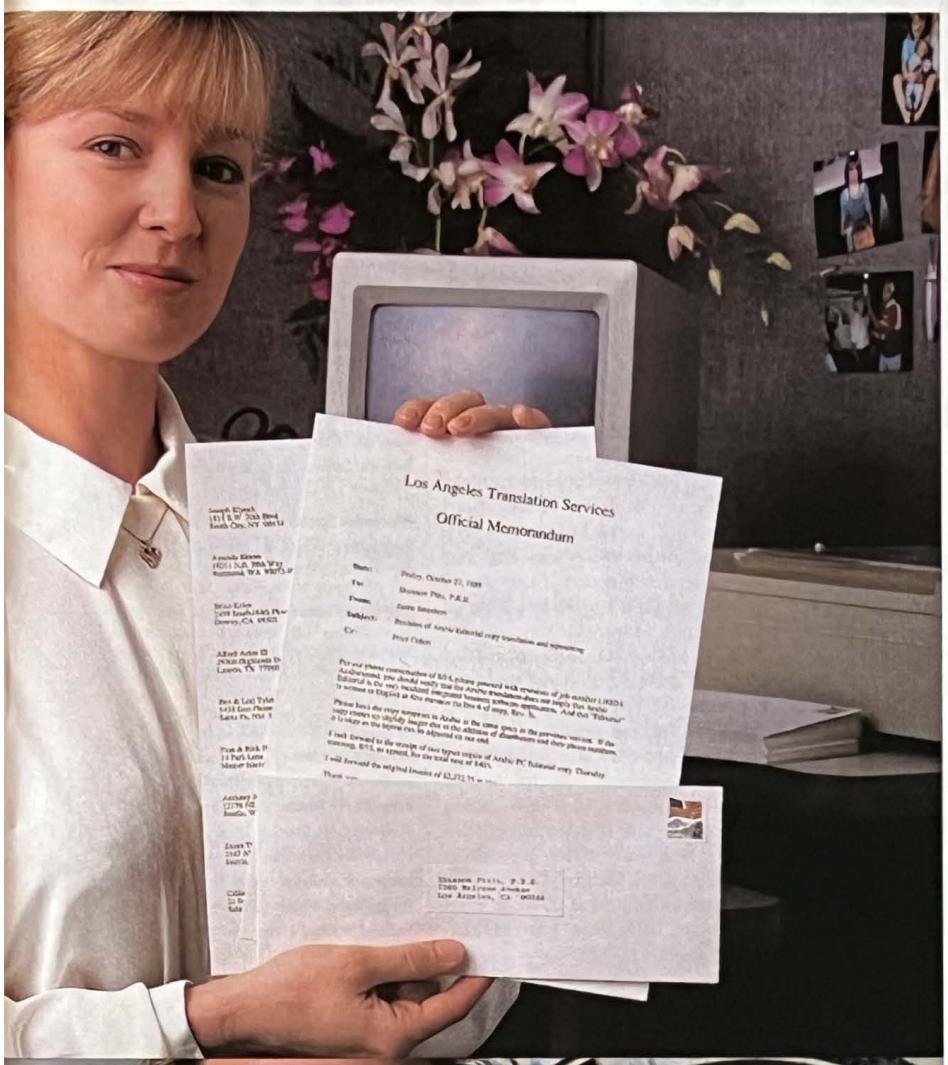
IDD Dreams up PictScript transfer feature

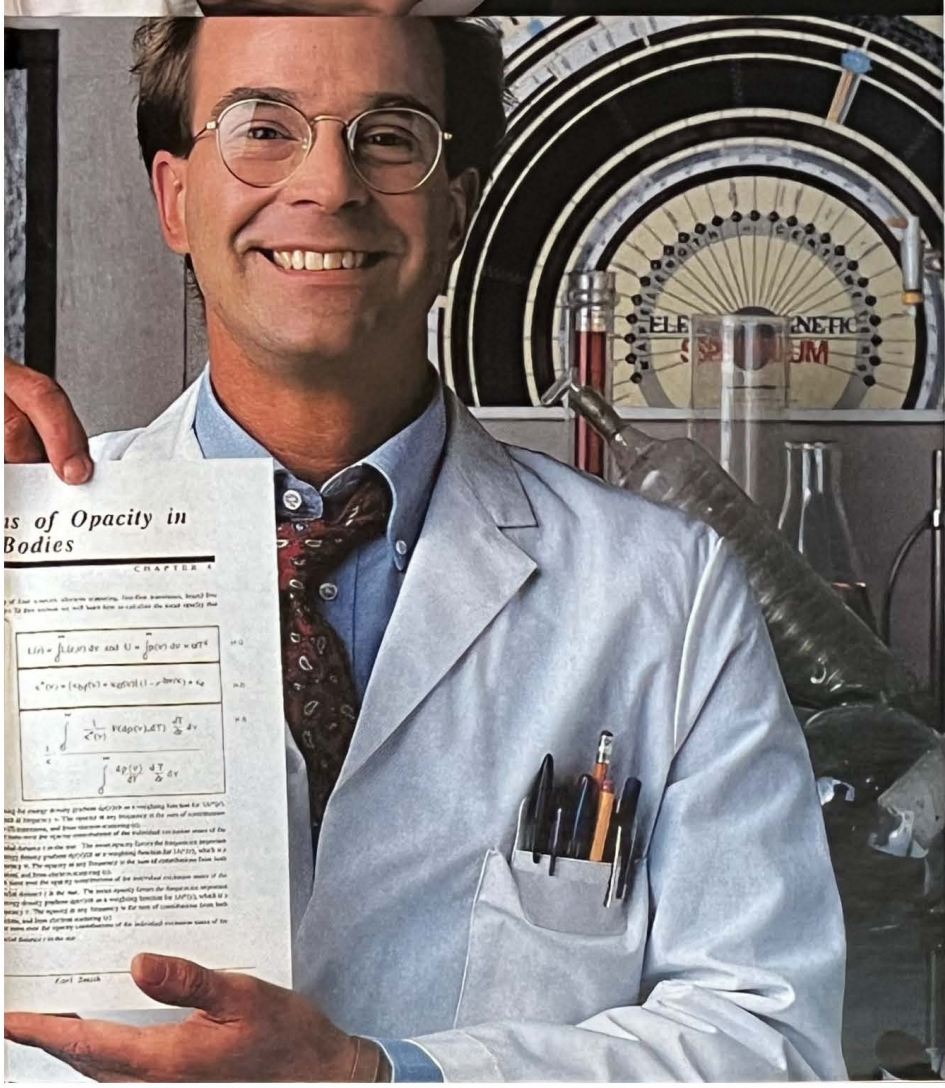
Concord, Calif. — Innovative Data Design Inc. last week released Dreams 1.1. The new release of the $500 drafting program introduces PictScript, a feature allowing graphics transferred to word processing and publishing programs to be manipulated on screen while retaining PostScript resolution. The upgrade is $25 or free to recent buyers. □

There's a Word fo



r people like you.





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A.M.E. sets new security standard

Casady & Greene ships gamma copies

By Henry Norr

Carmel, Calif. — It all began in November 1987, when a group of 8-year-old children beta testing a new Mac game decided to make more room on the hard disk they were using by throwing away some files. The game was Casady & Greene Inc.'s Crystal Quest; the disk belonged to Terry Kunysz, the company's vice president of sales and marketing and father of one of the youngsters; and the files contained important and personal financial data that had not been backed up.

Out of that incident arose the idea behind A.M.E., or Access Managed Environment, a new Casady & Greene program designed to provide a system administrator or authorized user with the most extensive and sophisticated set of security safeguards and access controls yet offered for the Mac.

This month, after more than two years of development and 10 months of beta testing at 135 sites, Casady & Greene began a limited gamma release of A.M.E. Version 1.0.2 — a real-world trial designed to ensure that what may be the most complex Mac utility ever written is bug-free. The developer is offering the software direct to up to 2,000 customers at $85 per copy; once it passes that test, A.M.E. will go into general distribution as Version 1.1 at $279 per copy, with the upgrade going free to gamma purchasers.

Version 1.1 also will be offered in a five-user pack priced at $895 and a 10-user pack at $1,495.

Written by Crystal Quest author Patrick Buckland, A.M.E. consists of two Startup documents (INITs), a desk accessory, an installer and a set of associated utilities. Features include:

- A password system for users and files that offers administrators a wide range of configurable options, among them the ability to require that all users choose a password and change it at specified intervals. The software can even check that new user passwords differ substantially from old ones.
- A hierarchical system of privileges, through which an administrator can authorize or prevent access by individuals and groups to specified system and A.M.E. functions. Besides password protection, file security options include two types of encryption and key-disk access controls. Files can be made accessible in an anti-piracy "run but not copy" mode.
- A Trusted Software function designed to ensure that only unmodified, uninfected versions of programs registered by the administrator can be used on the machine.
- A log that records access attempts and tracks specified activities, such as launching of applications and use of serial ports, printers, DAs and disks by any or all users.
- Visual and audio alerts in case of unauthorized activity.
- A System Folder Snapshot feature that can prevent alteration of any file in the folder.
- Control over the Chooser name, with an option to have the program set the Chooser name to match the name of the current user.
- Special options intended for Macs in university labs, dealer showrooms and other publicly accessible locations.

Cris Maloney, supervisor of the Microcomputer Technologies Group at Infotron, a Cherry Hill, N.J., telecommunications and networking company, said he hopes to install the program on all of the 200 Macs he oversees. "It's as much a corporate management tool as a security product," he said. "It's very well-thought-out and flexible."

Steve Chazin, an engineer at Raytheon Co. in Tewksbury, Mass., said, "They've tried pretty hard to make it the only security package you'll need. You can make it as secure as you want; it's defied every one of my attempts to break it."

Chazin said that A.M.E.'s seven-pass erasure option, which meets Defense Department standards, was especially welcome because in the past Raytheon has had to throw away hard disks after declassification.

Casady & Greene Inc. can be reached at P.O. Box 22920, Carmel, Calif. 93922; (408) 624-8716. □

If A.M.E. can't do it, maybe T.A.M.E. can

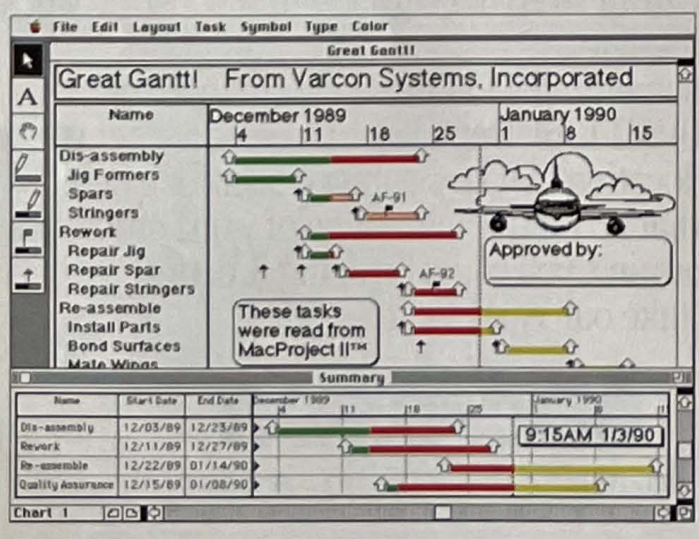
If A.M.E.'s own elaborate access controls are still insufficient, Casady & Greene Inc. will offer T.A.M.E., a special version of the program bundled with TouchSafe, a desktop fingerprint reader manufactured by Identix Inc. of Sunnyvale, Calif.

Connected to a Mac serial port, the device scans fingerprints and records a digital image. Access is controlled by comparing a print to one taken when the user is first registered in the system. Up to three fingers can be registered at a rate of about 30 seconds per finger; subsequent verification takes about two seconds, Casady & Greene said.

To ensure that it can't be fooled by a photostat or a wax or clay model, the TouchSafe records blood-flow patterns under the fingerprint. According to Casady & Greene, that feature also prevents attempts to use a disembodied finger to gain access to a T.A.M.E.-d Mac.

Prices start at about $3,000. *— By Henry Norr*

Great Gantt! peps up project charts



San Diego — Varcon Systems Inc. last month released Great Gantt!, a program that lets project managers develop presentation-quality Gantt charts. The $195 program can be used as a stand-alone application or as a complement to Claris Corp.'s MacProject (see MacWEEK, Oct. 31, 1989). Standard or custom symbols, logos, pictures, and text in any font, size or style can be placed anywhere on the chart. An outline view is one of several features that helps users navigate through documents measuring up to 8 feet by 8 feet.

Varcon Systems Inc. is at 10509 San Diego Mission Road, Suite K, San Diego, Calif. 92108; (619) 563-6700.

Magna revamps Empower series

By Henry Norr

San Jose, Calif. — Responding to increased competition in the security software market, Magna this month introduced a new, stripped-down version of its Empower package, enhanced the original Empower and announced promotional price breaks on both.

The new program, called Empower I, limits access to the Mac to registered users and administrators but lacks the original program's AppleShare-style access controls for individual files and folders. On demand or after a specified period of inactivity, Empower I can automatically blank the screen and lock out unauthorized users.

Other features include control over the use of floppy drives, hard disk locking, and a log that records access attempts and tracks start and stop times for projects. Empower I will list at $169 but is available at $85 through March 31.

Magna also has enhanced its original offering, now dubbed Empower II Version 3.0. New features include logging of access attempts, projects and administrator actions; volume-specific access privileges; and a DES (data encryption standard) encryption option. Regularly $395, Empower II is $296 until March 31.

Magna is located at 2540 N. First St., Suite 302, San Jose, Calif. 95131; (408) 433-5467. □

Pay shareware fees by phone

By Henry Norr

Encinitas, Calif. — Somak Software Inc., a distributor of shareware disks as well as its own HyperCard utilities, last week announced a new service designed to make paying registration fees to shareware authors "as easy as ordering a pizza."

The service, called TeleShare, allows customers to use the telephone to register and pay for shareware products obtained through Somak. Customers enter product ID numbers and Visa or MasterCard account information by pressing keys on a Touch-Tone phone.

The fees, Somak President Robert Eberhardt said, will be kept in a trust account, separate from the company's operating accounts, and dispersed monthly to the authors, along with the name and address of registrants. Initially, the company will retain 20 percent of the fees to cover expenses, but Eberhardt said he plans to lower the percentage when possible. "We're not looking to make money on TeleShare," he said.

Somak Software Inc. is located at 535 Encinitas Blvd., Suite 113, Encinitas, Calif. 92024; (619) 942-2556. □

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Informix

From Page 1

Claris is evaluating not only HyperScript but also the graphics and spreadsheet capabilities of the newly acquired technology, according to John Zeisler, vice president of marketing for Claris. "This [purchase] is the last major building block we need to complete the technical underpinnings for a full line of business applications" that will work together, he said.

Informix also announced that Informix-OnLine, its "on-line transaction processing multimedia database," will be shipped by midyear for the NeXT machine and will be ready for OS/2 networks by the end of this quarter. Already available for some Unix platforms, Informix-OnLine is a SQL-based relational database that stores audio, video or textual information as objects.

Steve Jobs, chairman of NeXT, was present to tout the relationship between Informix and NeXT and to stress the importance of off-the-shelf applications to the success of the NeXT machine. "Future front ends to large corporate databases will be based on user-programmable graphical interfaces such as spreadsheets," Jobs said.

Via Wingz and DataLink technology, users will be able to access data from the Informix-OnLine database on any supported server platform. Wingz' HyperScript language can then be used to create front-end application views to that data, officials said.

Wingz' competitors have not been idle, however. Although their spreadsheets already have CL/1 support though external macro tools written by Fairfield Software, a third-party CL/1 and connectivity developer in Fairfield, Iowa, both Microsoft Corp. and Ashton-Tate Corp. have plans to incorporate CL/1 directly into their products.

"CL/1 will be integral to [Microsoft Excel], although we have taken a different approach from Informix," said Dawn Trudeau, Macintosh Excel product manager for Microsoft. She said CL/1 will be integrated into Excel by the end of this quarter, also as a menu item.

Rich Sorkin, product manager for Ashton-Tate's Full Impact, said the company plans a "family of tools across platforms that will provide a good marriage between Full Impact and database technology." Ashton-Tate produces the popular dBASE series but also is a partner with relational database supplier Sybase Inc. of Emeryville, Calif.

CHUCK NACKE/PICTURE GROUP

Announcing that Claris has acquired rights to Wingz code, Informix CEO Phillip White said the relationship "just signifies that we have great technology."

Existing Wingz users will be able to purchase a "retro-pack" DataLink upgrade from Informix in March. Pricing has not been set but will be "low," according to the company. DataLink will be included as a standard feature in all future versions of Wingz.

Businessland will carry the NeXT version of Wingz, which is scheduled to ship in March for $699. Informix-OnLine is expected to support NeXT by midyear.

Informix Software Inc. is located at 4100 Bohannon Drive, Menlo Park, Calif. 94025; (415) 926-6300. □

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Mac Wk 1/16/90

Outbound

From Page 1

redocked to the lobotomized and otherwise useless Plus or SE, combining the resources of both machines — RAM, hard disks, keyboards and screens.

Scheduled to ship in mid-February, the floppy-based Outbound with 1 Mbyte of RAM and a 15-MHz 68000 chip will list for $2,995. A system with a 40-Mbyte internal hard disk will cost $4,299. An adapter cable for external hard disks, a mouse, spare batteries and a carrying case are optional.

Vital statistics. The Outbound weighs in at 10 pounds, a featherweight compared with the 16-pound Macintosh Portable. It is smaller, too — just 12.3 by 7.8 by 3.6 inches.

The Outbound's screen is the same size — 640 by 400 pixels — as the Mac Portable's, but in place of Apple's expensive active-matrix technology the smaller machine has a standard back-lit liquid-crystal display. As a result, the screen is more legible in dim light but slower to respond and more prone to cursor "submarining" (a visual effect in which the cursor disappears while you're moving the mouse and reappears when you stop) than the Mac Portable's screen.

The Outbound can accommodate either a floppy disk drive or a hard disk, but not both. The basic floppy is similar to the Apple SuperDrive, which can read and write all Macintosh and IBM PC 3.5-inch formats. There are two serial/AppleTalk ports, a connector to the host Mac, and an external display port.

The Outbound has two banks of standard SIMM (single in-line memory module) slots, one for regular system memory, the other for a battery-backed, bootable "silicon disk." Each can take 4 Mbytes of RAM, but the non-volatile RAM disk is expandable to 16 Mbytes as 4-Mbyte SIMMs become more available.

The Outbound uses the sealed lead-acid batteries commonly found in cellular phones and video cameras, which cost less than $50. They power the portable for about three hours. The screen is a significant power drain and, aside from a Control Panel document that can turn off the back lighting or the hard disk after a specified period of inactivity, power-management features like those of the Mac Portable are not available.

Outbound software includes Control Panel documents for system and cursor-control settings, a battery-metering desk accessory and DOS.INI, a Startup document (INIT) that mounts DOS disks to the desktop.

Missing mice. The Outbound keyboard is small and light but lacks a numeric keypad. It can be detached and used through an infrared link or connected directly to the main unit.

Below and parallel to the space bar is an unusual pointing device called an IsoPoint, which consists of a small rolling bar. You can move the cursor vertically by rolling the bar and horizontally by sliding it from left to right. Since the IsoPoint's horizontal range of motion is smaller than the screen, you must slide the bar against an end and hold it there to make the cursor reach the edge of the screen. Pushing down on the whole mechanism is the equivalent of pressing the mouse button.

Users tend to love or hate the IsoPoint: It's a matter of personal preference. Fortunately, if you fall into the latter category, Outbound Systems offers a $95 mouse. Both the IsoPoint and mouse are mechanical, to save battery power, and therefore cursor response is poor or non-existent during disk operations.

Conclusions. The Outbound Laptop System is more than just a poor-man's Macintosh Portable. It represents a different set of compromises from those found in Apple's machine. Measured in price, features and expandability, it is a lower-end package.

Our main frustration with the Outbound is that it, like other Macintosh-derivative CPUs, is not quite a Mac: The submarining cursor, the absence of a numerical keypad, the inability to combine hard and floppy drives within the unit, and other differences require some adjustments.

But if small size, lighter weight and an appreciably lower price are important to you, and these minor differences don't cause too much frustration, the Outbound has a lot to offer. Like the myriad MS-DOS laptops in the same price range (or lower), it may well prove popular among traveling salespeople, journalists and others who want a Mac on the road.

Outbound Systems Inc. is at 2540 Frontier Ave., Boulder, Colo. 80301; (303) 786-9200. □

TOPS

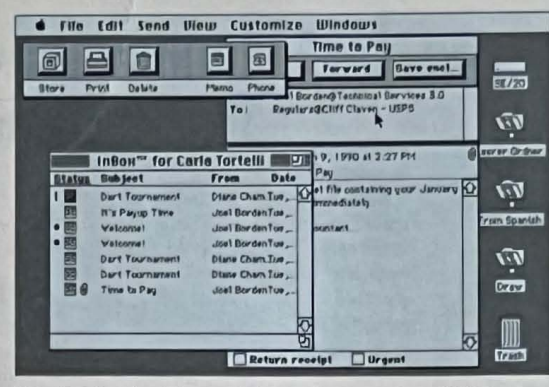
From Page 1

its product offerings. The new TOPS Network Bundle for Macintosh, available now for $299, supports AppleTalk zones, includes print spooling software and file format translators, and has been updated to work with all AFP (AppleTalk Filing Protocol)-compatible applications.

The TOPS Network Bundle for PC, slated to ship in February for $249, integrates support for extended memory beyond 640 Kbytes, printing to LaserWriters and other Macintosh-compatible printers, and improved configuration and server support.

Seeking to reinforce its position in the increasingly competitive E-mail market, TOPS is bundling InBox 3.0, the entry-level version of its upgraded E-mail package, free with all 600,000 nodes of TOPS being upgraded this week (see MacWEEK, Nov. 21, 1989, and related story, Page 61).

That bundle is "the most fully functional demo program of all time," said Jack Kolk, vice president of product planning for MacAmerica of San Jose, Calif. InBox 3.0 groups are limited to 20 users and cannot be linked to create larger message centers, nor can they use gateways. InBox 3.0 users must pay full price to upgrade to InBox Plus 3.0, the "enterprisewide" system that supports up to 100 users per Message Center, routing among multiple message centers and third-party gateways.



InBox 3.0, introduced last week along with new versions of TOPS' networking software, will begin shipping later this month for $329.

Nevertheless, given that the majority of TOPS sites contain fewer than 20 users, the bundle is "a brilliant marketing strategy that offers real end-user value," Kolk said.

InBox 3.0 will ship Jan. 26 for $329. InBox Plus 3.0 will ship Feb. 2 for $995. Registered InBox 2.2 users can upgrade to InBox Plus 3.0 for $250 per Message Center.

TOPS also announced an aggressive upgrade policy for the new Network Bundles. Registered users of TOPS/Macintosh and TOPS/DOS 2.0 and 2.1 will be offered a site upgrade to the Network Bundles for $125 each (DOS or Mac) or $185 for both platforms. The upgrade includes InBox.

TOPS' new relationship with Sun is still being worked out. The new board will be composed of "Sun and TOPS management as well as members of the industry at large," Shapero said.

"The issue was control," he said. "Sun will now be a partner, much like the Apple/Claris relationship." Apple spun off Claris Corp. in 1987 to market its application software.

TOPS Inc. is at 950 Marina Village Parkway, Alameda, Calif. 94501; (415) 769-9669. □

Staff Reporter Carolyn Said contributed to this report.

Portable

From Page 1

But most dealers report that the supply of the Portable outpaces demand. "I could supply the entire Midwest from my stock of Portables," said Dan Neesly, president of North Shore Computers in Milwaukee.

"Euphoria over the Portable has dropped to zero," said Peter Jackson, Macintosh sales manager of New York-based ComputerLand of Murray Hill, which has sold about 15 Portables to date. Short supply does not account for the lackluster sales, Jackson said. "We can get them anytime we want."

Dealers continue to point to pricing — about $6,500 for a machine with a 40-Mbyte hard disk — and performance — the Portable is powered by the dated Motorola 68000 processor — as the main reasons the unit has not generated high sales.

"My original order was about six, but I canceled that because a couple of the customers I thought would take it said it was way too expensive," said Mel Weisblatt, owner of the Computer Outlet in New York. "I've been getting a lot of flack from consumers on them."

"The Portables we have sold have only gone to the highest-level executives, where price is no object and performance is not an issue," said Neesly. "Real Mac users would like to have a Mac Portable, but they also want performance."

He has found that some customers would rather wait for Apple's next generation of the Portable. "People don't want to make the commitment with the specter that the next day Apple will announce a low-power, 68030 machine with a back-lit screen."

Other dealers report customer disappointment with the Portable's much-vaunted screen. "When you take it from one lighting situation to the other, it's a disaster," said Jackson, adding that the screen is difficult to read in dimly lit areas. "One of my customers attached one of those little book lights to the screen." □

Staff Reporter Edwin Garcia contributed to this report.

Virus

From Page 1

erratically and windows refusing to go away. Aware of the new WDEF virus, she quickly rebuilt her Mac desktop, and the problem disappeared. Although she hasn't confirmed her suspicions, she thinks it likely that WDEF had made its first appearance on her campus.

Alsop's story is perhaps indicative of the state of the struggle against the virus threat. 1989 was a year of uneasy equilibrium: nVIR and its contagious cousins continued to raise their heads, but they are by now known quantities, pesky but limited in their destructiveness. In most situations, they can be contained through conscientious education in "safe computing" procedures and judicious use of the increasingly sophisticated tools available to virus fighters.

But WDEF, which surfaced in November on the heels of the discovery of yet another nVIR mutation, has reminded attentive Mac users and managers that there are no grounds for complacency on the virus battleground. It has spread farther and faster than any previous Mac contagion. Even more ominously, it is the first Mac virus that incorporates a "stealth mechanism" designed specifically to circumvent virus blockers.

Perhaps the most-troubling news concerns the AIDS Information program mailed to thousands of Western Europe computer users last month. It runs under MS-DOS, not the Mac, and it is not a virus, but a "Trojan horse" — a non-contagious program that masks malicious purposes behind a benign facade.

But AIDS Information raises the specter of organized techno-terrorism. At 320 Kbytes of compiled code, it is "orders of magnitude more complex and interwoven than any personal computer-based virus or 'Trojan' yet encountered," according to Santa Clara, Calif.-based "virus buster" John McAfee. According to a Chase Manhattan Bank estimate published in the British computer press, the perpetrator's initial investment in disks, professional printing and packaging, and mailing must have exceeded $158,000.

Last month's flurry of Mac virus news sent developers of anti-virus tools scurrying to keep pace. Symantec Corp., for instance, announced Version 1.2 of its SAM package to deal with the latest nVIR mutant, canceled it in favor of a Version 1.3 designed to cope with WDEF, then within days introduced Version 1.4 to handle a second WDEF variant.

In light of these developments, user-configurable anti-virus tools like Jeff Shulman's shareware VirusDetective DA look like an increasingly important weapon in the modern virus-fighter's arsenal, and makers of commercial utilities are expected to add such flexibility in upcoming updates. Mac managers are also flocking to anti-virus subscription services, a concept pioneered by HJC Software Inc. with its Virex utility, later adopted by Symantec, and last week introduced by Mainstay for its entrant, Anti-Toxin.

Meanwhile, application developers are looking at ways to make Mac systems virus-hostile. Advanced Software Inc. has adopted anti-contamination algorithms developed by Michael Odawa of the Palo Alto, Calif.-based Software Development Council for its DocuComp utility, and Claris Corp. and Apple have now done likewise with MacWrite II and AppleLink 5.0, respectively. Other developers are reportedly planning to follow suit.

Meanwhile, as Robert Morris, the alleged author of last year's Internet electronic worm, went on trial in Syracuse, N.Y., last week, computer-conscious legislators are planning new efforts to stiffen state and federal laws that could be used against virus writers. When Rep. Wally Herger of California's Second District introduced an anti-viral amendment to the 1984 Computer Fraud and Abuse Act in 1988, many of his colleagues laughed at him, according to Doug Riggins, Herger's legislative assistant.

Today, however, the amendment has 77 cosponsors and should begin to move through the legislative process after the Morris trial, Riggins said. □

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Sang Chaul Shin: Software Engineer, Seoul, Korea
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'Instamatic' of the imaging market

Document scanning from First Financial

By Carolyn Said

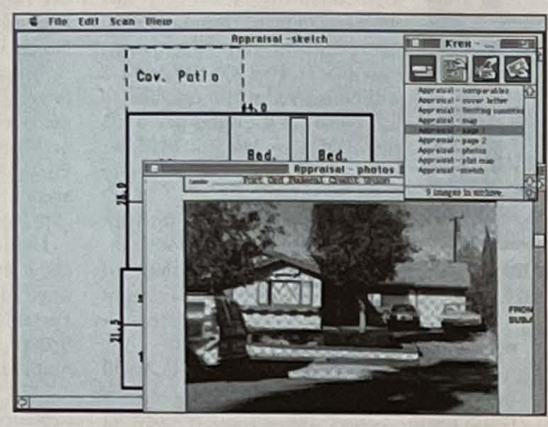
Rolling Hills Estates, Calif. — Reviving the old dream of the paperless office, First Financial Technology wants to put a Mac equipped with its inexpensive document-imaging system on the desk of every worker overwhelmed by mountains of forms and files.

Instant Image, the company's Mac II-based system, includes software for archive management and retrieval, plus the CEP-100, a NuBus card designed for speedy compression and decompression of scanned documents. The system sells for $1,595 for single units or, when purchased in orders of 10 or more, $995.

Calling his product "the Instamatic of the imaging market," Peter Sajovich, First Financial director of marketing, said: "We believe the Mac is the best and the cheapest platform for imaging. Rather than rely on huge filing rooms, everyone at a company can just call up any document they need to see on their Mac screen."

Using an AMD7971 processor, 128 Kbytes of static RAM and algorithms adopted as standards by the Consultative Committee International Telegraph and Telephone (CCITT), the CEP-100 can compress data at ratios of up to 135-to-1, then decompress it in 0.3 to two seconds, First Financial said.

Instant Image produces four-bit gray-scale images of scanned documents. Its software lets users label images, organize them, add comments, print, zoom in, save them as PICT files and transfer them to other archives. About 50 images can be viewed simultaneously at 75 dpi; about 30 100-dpi images can be viewed at once.



Any document, from photographs to forms, can be scanned into Instant Image, compressed, stored and quickly retrieved. So far, the First Financial Technology product has been put to use mainly at financial institutions.

The system works with three high-speed Fujitsu scanners — the $5,520 Fujitsu M3096 and the M3095E and M3096E, two sheet-feed models priced at $6,720 — or with the $1,799 Apple Scanner or the $1,495 Microtek MSII sheet-feed scanner. The Fujitsu scanners require an interface board, which is available from First Financial for $595 or, for multiple orders, $495.

Electronic-image management systems are a burgeoning field, according to the Silver Spring, Md.-based Association for Information and Image Management Systems (AIIMS). Options range from one- or two-user IBM-PC-based systems that start at $50,000 to high-volume multi-user systems selling for $300,000 to $5 million, according to David T. Bogue, AIIMS president.

On the Mac, the primary imaging system has been MARS from Micro Dynamics Ltd. of Silver Spring, Md. The company offers hardware and software installations with far more sophisticated search features than Instant Image, but with a price tag to match: Complete systems start at about $45,000, including all peripherals.

Instant Image users need a Mac II-line machine with at least 4 Mbytes of RAM, a storage device with at least 20 Mbytes available, and a gray-scale or color monitor. Optimally, users should have a WORM drive or an erasable optical storage unit, Sajovich said.

The Fort Ord (Calif.) Federal Credit Union has found retrieval of documents stored with Instant Image to be "unbelievably fast," according to Bruce Adams, the credit union president. "The Mac is amazing in what it can do [for imaging]. It can do more [than conventional systems] and save us a lot of money at the same time," he said.

"Our technicians are tickled to death with it," said Joe Harvey, executive vice president of the lending division of Countrywide Credit Industry National Headquarters in Pasadena, Calif. Harvey's group uses The Mortgage Solution, a First Financial vertical application that combines Instant Image technology with an electronic mortgage-origination system.

First Financial also is supplying externals, priced at $495 each, that allow developers to incorporate Instant Image into other vertical-market applications. Externals for Fox Software's FoxBASE+/Mac and Blyth Software's Omnis 5 are available now; externals for ACIUS' 4th Dimension and Silicon Beach Software Inc.'s SuperCard are in the pipeline. For developers who want to go beyond Instant Image's features, First Financial provides $995 C-language libraries that can be used to access the CEP-100 board.

First Financial Technology is at 609 Deep Valley Drive, Third Floor East, Rolling Hills Estates, Calif. 90274; (213) 541-9446. □

In Focus Systems' PC Viewer is first LCD panel to project real color

By Carolyn Said

Tualatin, Ore. — The first LCD panel that can project real color recently began shipping.

The 480C PC Viewer from In Focus Systems Inc. "brings boardroom-quality color to interactive presentations at a reasonable price, compared to video projectors," said Scott Niesen, In Focus marketing manager.

The 480C projects in eight colors: cyan, magenta, yellow, red, blue, green, black and white. For images containing more than eight colors, the panel maps the closest color available.

"I've been surprised at how well it translates full-color images," said David Brunn, a Mac consultant based in Lake Oswego, Ore.

"The 480C is fantastic for presentations," Brunn said. "It's a very viable, economic way to project colors that are quite clean and quite good. Who wants to lug around a 37-inch Mitsubishi monitor?"

Another advantage, Brunn said, is the 480C's ability to "hold its colors no matter how hot the projector is. I've left it on for eight hours every day for a week and there was no screen breakup."

The $4,995 LCD panel requires a $249.95 external adapter box for Mac II line machines.

The external adapter box "lets you keep your monitor and doesn't tie up a NuBus slot," Brunn said.

In Focus Systems Inc. is located at 7649 S.W. Mohawk St., Tualatin, Ore. 97062; (503) 692-4968; (800) 327-7231. □

The 480C PC Viewer from In Focus Systems is the first in a new generation of LCD devices that display real colors. The panel can project in cyan, magenta, yellow, red, blue, green, black and white.

Deneba upgrades Canvas, Coach

By Connie Guglielmo

Miami — Deneba Software is shipping a new version of Canvas that adds a four-color separation utility to the graphics program.

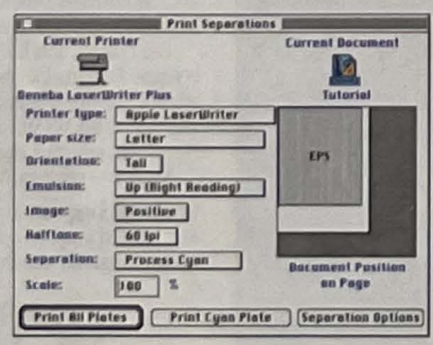
In addition to the new Canvas Separator utility for generating CMYK (cyan, magenta, yellow, black) separations, Canvas 2.1 provides a 100,000-word spelling checker, the ability to save graphics in Encapsulated PostScript format and support for MacDraw II's native file format, allowing direct import of drawings from the Claris Corp. program.

Other enhancements include a new dashed-line editor, better handling of Bezier curves and an improved Alignment Manager.

Deneba also announced the release of Version 3.1 of Coach Professional, improving the spell-checking desk accessory's interface and adding a 30,000-word technical dictionary and the company's 100,000-word BigThesaurus. The program is now compatible with Microsoft Word 4.0, MORE II, MacWrite II, QuarkXPress 2.1, PageMaker 3.0, HyperCard and most other leading applications, the company said.

Canvas 2.1 is free to users who purchased it after Aug. 1, 1989, while the new Coach Professional is free to those who bought it after Aug. 1, 1988. For other customers, each upgrade is $30.

Deneba Software is located at 3305 N.W. 74th Ave., Miami, Fla. 33122; (305) 594-6965. □



Version 2.1 of Deneba Software's Canvas drawing program includes the Canvas Separator utility for generating four-color separations.

ViewFrame RGB may display up to 27 colors at ship date

By Carolyn Said

Newport News, Va. — Claiming to offer the best color translation of any LCD panel, nVIEW Corp. recently introduced the ViewFrame RGB.

The $3,995 ViewFrame RGB can project 16 colors, which its built-in software maps from the computer screen, at 640-by-480-pixel resolution. When it ships later this quarter, the panel may be able to project up to 27 colors, according to Robert Brown, nVIEW communications manager.

"We offer a very close interpretation of what is on the monitor," Brown said. "The possibilities to use color in a presentation via the ViewFrame RGB are really exciting."

The panel's features, which can be accessed through a remote control device, include controls for contrast; image inversion; the palette; horizontal and vertical adjustments; focusing; red, green and blue intensity; the screen; calibration; and help. The ViewFrame RGB automatically remembers a user's adjustments.

The panel comes bundled with cabling that connects it to all Mac models. Adapter kits, available from nVIEW for $149, are required to create an external video port for the Mac SE, SE/30 and Plus.

nVIEW Corp. is located at 11835 Canon Blvd., Newport News, Va. 23606; (804) 873-1354. □

SUM II disk utility, DataPak to be bundled

Sunnyvale, Calif. — Mass Microsystems Inc. will bundle Symantec Corp.'s SUM II disk utilities with its DataPak removable storage systems for the Mac, the two companies announced. The agreement encompasses the original DataPak 45, the DataPak II for the Mac II, and the new smaller-footprint DataPak IIcx for the Mac IIcx and IIci.

Mass Microsystems Inc. is located at 550 Del Rey Ave., Sunnyvale, Calif. 94086; (408) 522-1200. □

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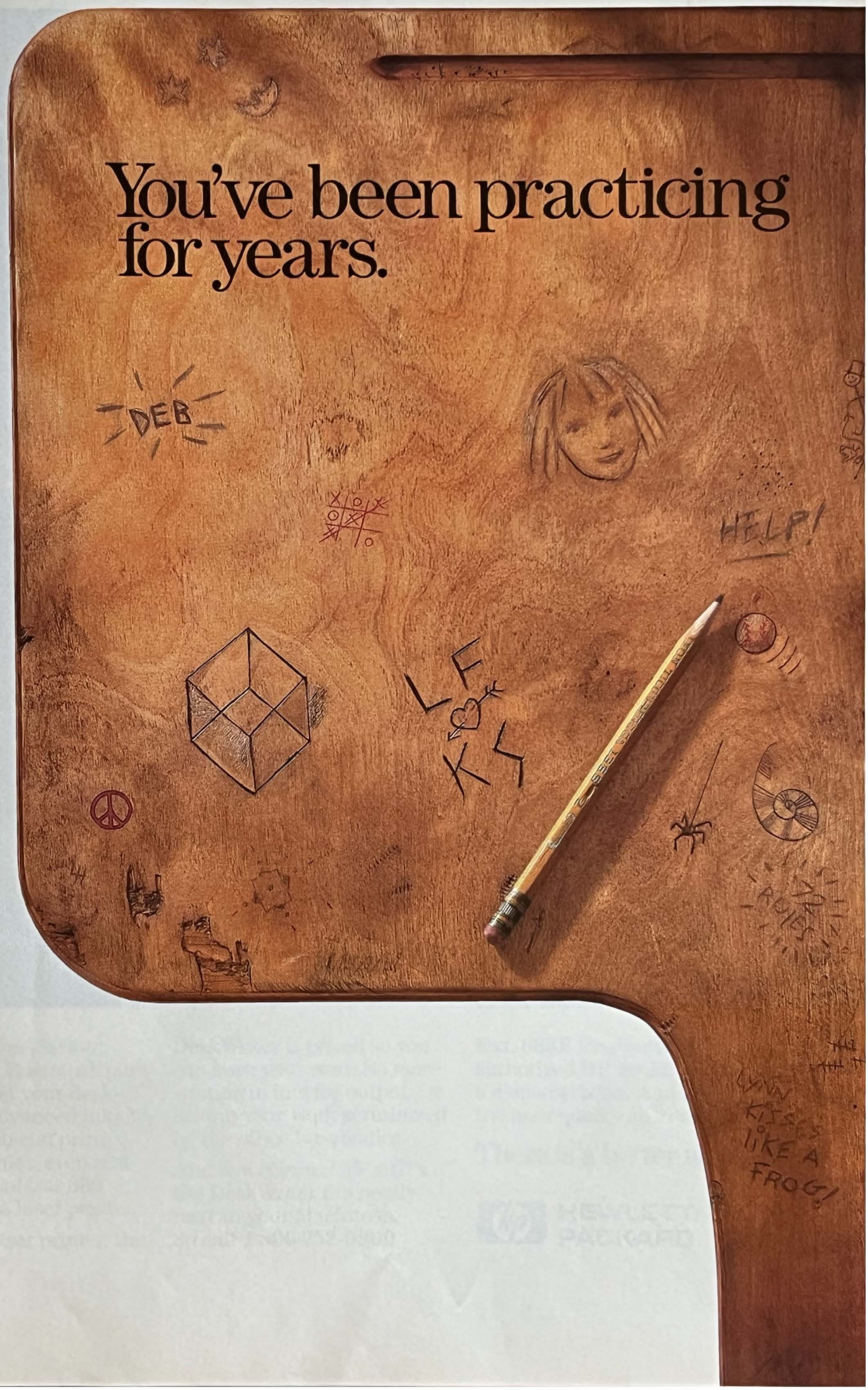

Now it's time to play.

Graffiti in the Schools
by Kevin Shanahan
The stucco buildings at Lawrence Hirsch Vo-Tech High School feature a giant piece of abstract doodling. Spray-painted red, black, and yellow, the tangled mass of writing reaches a height of ten feet and runs the length of a city block.
Some students and staff call it street poetry. Others call it vandalism. Nearly all agree that the graffiti appearing on the nation's school buildings is a growing problem for teachers and administrators who fear student violence if they crack down. "If I mucked up the gym walls when I was a kid, they would have laid the paddle on me," said Gyorgi Szepsikoff, weightlifting coach at Fritch High. "Now with kids packing who known what in their lunch boxes, I think twice about disciplining them."
Defenders of graffiti say it gives teenagers a rare opportunity to express themselves. "With strict regimentation of male and female roles and the stifling insistence on the material Ameri-
can Dream, young individuals must achieve autonomy through what few creative outlets they have," said Tamara Birdsall, executive director of DEEP (Defenders of Extemporaneous Expression by Pupils).
Despite the current controversy, graffiti is nothing new. Early examples date from the appearance of the first written languages. "It's just what you would expect,"
LF K$
Graffiti hammered in Plato's classroom.

Introducing the HP DeskWriter printer for the Macintosh. $1195.*

*Suggested U.S. list price. ©1989 Hewlett-Packard PE12921

RESUME: Linda Fitzsimmons
17 Old Mill Lane
New Lanark, CT 06878
(203) 555-1278
OBJECTIVE:
To work as an interior decorator.
EXPERIENCE:
Protocol Secretary, Mammon Industries, 1988–present. Taught employee etiquette class. Adapted Southwest color scheme for executive offices. Co-authored "How to Tell If You're Descended from the Mayflower Pilgrims."
President, Creative Closet Designs, 1985–87. Developed ancillary storage solutions for homeowners and small businesses.
EDUCATION:
B.A. degree in Mass Communications, University of the Adirondacks, 1984
Spent the fall semester of junior year at L'Ecole de Beaux Arts, Lucerne, Switzerland.
REFERENCES:
Available upon request.
Sales of Ice Cubes (in millions)
In the 1980s, sales of ice cubes nationwide increased as the fitness generation discovered numerous outdoor recreational opportunities. This sales increase is most notable in the West and Southwest regions where drought conditions prevailed.
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1987 45.9
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HEWLETT PACKARD

DAtabase, Vantage DAs get updates

By Henry Norr

Memphis, Tenn. — Preferred Publishers Inc. last month announced updates to its two popular desk accessories, DAtabase and Vantage.

▶ Version 2.0 of DAtabase, a $129.95 information manager, speeds up opening and closing of files by "an order of magnitude" and is some 20 percent faster at searches and sorts, the company said. New features include searching for records before or after certain dates, sorting by date, and support for international date formats. The program, which could previously store a maximum of 2,500 records per database file, is now limited only by disk space.

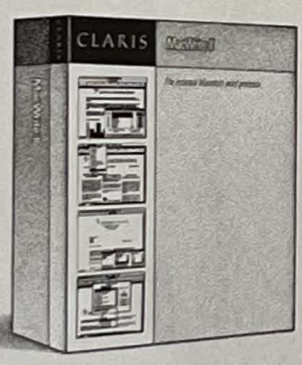
▶ Version 1.5 of Vantage, a $99.95 Apple-menu text editor and text-processing tool, adds true word wrap, without insertion of carriage returns. New marker commands allow users to set up to 10 numeric markers in any window's text and jump quickly to those markers. New printing capabilities include headers and footers and automatic margin settings.

Other enhancements include the ability to extract text from Microsoft Word 4.0 files and a fivefold speed increase in the Find function, according to the company. A variety of new Vantage external commands (VCMDs) are bundled with the program, including one that allows "sloppy searches" that find close matches to a query word and others that allow opening, deleting and processing of groups of files with a single command.

Vantage 1.5 is available now, the company said, while DAtabase 2.0 is due later this month. Each upgrade is priced at $15 for registered owners; upgrades are free to those who purchased an earlier version after Nov. 15, 1989.

Preferred Publishers Inc. is located at 5100 Poplar Ave., Suite 617, Memphis, Tenn. 38137; (901) 683-3383; (800) 446-6393. □

If your Mac is at a loss for words, you'd better talk to Software Spectrum.



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New displays from Mobius Technologies, La Cie, Generation X

By John Battelle

San Francisco — Mac users looking for display systems got more options in the waning days of 1989.

▶ Mobius Technologies Inc. shipped an enhanced version of its MultiScreen SE video card, which allows inexpensive multisynching IBM or compatible monitors to be used with the Mac SE. The $395 card, redesigned to a compact 3-by-5-inch size, now includes a pass-through connector that facilitates the use of another add-in board such as an accelerator. A $89 SlotXpander device attaches to the pass-through connector on the top of Mobius' board and allows the second board to stand vertically inside the SE.

▶ Generation X Technologies last month shipped the CT-II eight-bit color system for the Mac II, and this month will ship the CT/30 for the SE/30. Based on the 20-inch Ikegami Trinitron monitor, each system will cost $3,999, which includes a one-year warranty. Generation X's software provides tear-off menus, large cursor and large menu-bar options, a screen saver and screen-copy utility. The boards have socket connectors for future hardware upgrades, the company said.

Generation X also announced the T-24gx, a 24-bit color, 20-inch Ikegami Trinitron system due this month. The $4,999 T-24gx, which comes with a three-year warranty, will support hardware pan and 4x zoom, a virtual desktop of up to 8,192 by 1,024 pixels and the same software features as the CT systems.

▶ La Cie Ltd. last month shipped the La Monz eight- and 24-bit color systems. Priced at $3,999 and $5,999, respectively, both systems are based on a 19-inch Sony Trinitron monitor and offer a resolution of 1,024 by 768 pixels at 72 dpi. The La Monz products come with a tilt-and-swivel base and a one-year warranty.

Mobius Technologies Inc. is at 5835 Doyle St., Emeryville, Calif. 94608; (415) 654-0556.

Generation X Technologies is located at 333 W. El Camino Real, Suite 310, Sunnyvale, Calif. 94087; (408) 739-4570.

La Cie Ltd. is at 16285 S.W. 85th, Suite 306, Tigard, Ore. 97026; (503) 684-0143. □

Orange Micro upgrades boards

Anaheim, Calif. — Orange Micro Inc. last month released a software upgrade for its $699 Mac86 and $1,599 Mac286 MS-DOS coprocessor boards. Version 2.1 provides improved printing quality, offers users the option of a smaller 10-Mbyte DOS partition on their Mac disks, and makes the Mac286 compatible with the Mac IIci. The update is $10 but free to recent buyers using a IIci.

Orange Micro Inc. is at 1400 N. Lakeview Ave., Anaheim, Calif. 92807; (714) 779-9332. □

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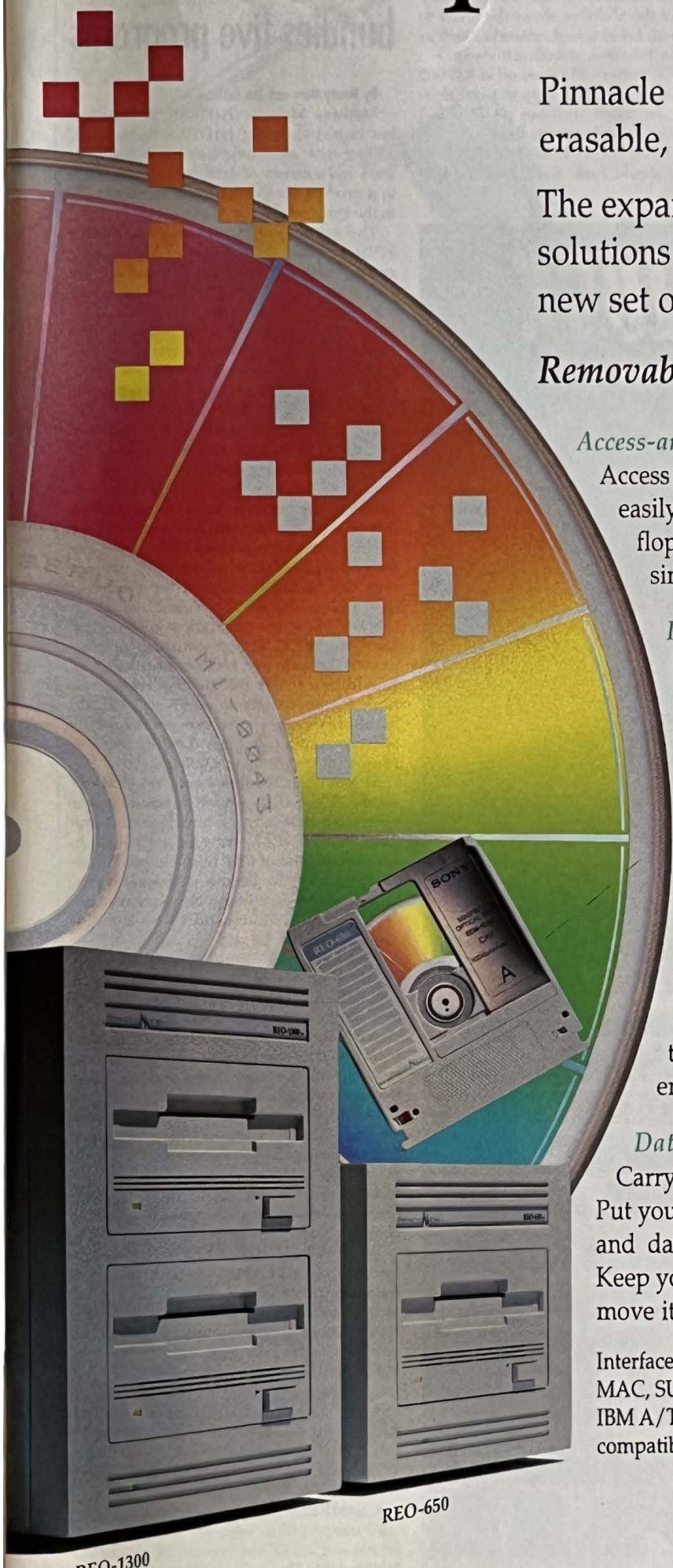

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Router for fiber-optic internets

By John Battelle

Menlo Park, Calif. — cisco Systems Inc. has announced the first internetwork router to support multiple protocols between fiber distributed data interface (FDDI) networks.

FDDI is being touted in some circles as an emerging industry standard for high-speed networking. Designed for fiber-optic cabling, FDDI supports data transmission at speeds of up to 100 Mbps, 10 times the maximum speed of Ethernet.

The new router, set to ship this quarter, can be used to connect Ethernet, token ring, X.25 or point-to-point networks to an FDDI backbone, according to cisco. It supports AppleTalk as well as DECnet and TCP/IP, and conforms to the American National Standards Institute X.3T9.5 fiber ring standard.

The router adds a new "cBus" back plane to cisco's original Multibus to accommodate the speed of direct fiber-to-fiber connections. Retention of the Multibus allows the router to interface with lower-speed networks, such as token ring or Ethernet, according to cisco.

The FDDI router will be priced at $38,000 for a version configured to support two Ethernet LANs. Installed Multibus ("A-chassis") routers can be upgraded in the field.

cisco Systems Inc. is located at 1350 Willow Road, Menlo Park, Calif. 94025; (415) 326-1941. □

1stDESK System 4.1 bundles five programs

By Henry Norr and Jim Forbes

Medway, Mass. — 1stDESK Systems Inc. has begun shipping 1stDESK System 4.1, adding new electronic bulletin board software and a variety of database enhancements to a product family that traces its roots back to the early days of the Mac.

The system, marketed as a bundle for $795, includes five new or enhanced programs, all labeled Version 4.1 and all also sold separately. The new programs include:

▶ 1stTEAM, the cornerstone of the company's line, is a database program that Edward Hinds, 1stDESK director of sales, called "an easy-to-use relational FileMaker."

The new program, which is sold separately for $495, replaces 1stFILE and 1stBASE, earlier data management programs marketed by 1stDESK. Enhancements include plain-English search commands, time and date calculations, and improved capabilities for creating and printing reports and mailing labels. A built-in macro language lets users combine multiple operations into one; since the macros are stored as separate documents, they can be launched from the Finder or from a user-designed HyperCard front end.

▶ 1stBBS, a new program available separately for $195, is a password-protected remote database and bulletin board system. In addition to file transfer and electronic mail, it supports remote access to 1stTEAM databases and, via an included format-conversion utility, to other database systems. It works at speeds up to 9,600 bps.

At New Age Typographers Inc. of Huntington, N.Y., 1stBBS is used to take customer orders and receive typesetting files electronically. The 1stDESK software has helped to pare the amount of time business professionals spend on the phone with customers, according to Larry Blum, business manager. "It alleviates what used to be a major headache for us," he said.

The 1stDESK bundle also includes enhanced versions of three older applications:

▶ 1stSCAN, available separately at $195, lets users convert forms scanned from hard copy or created with Mac graphics applications into data entry forms. The program can read files in MacPaint, TIFF and PICT formats, according to the company.

1stSCAN identifies any box or underlined area as a field; data can be typed or merged into the form to add to an existing 1stTEAM-compatible data file or to create a new one. Subject to disk space limitations, the program can handle up to 2 billion records, the company said.

While it lacks the sorting and reporting facilities of 1stTEAM and other full-blown database programs, 1stSCAN includes a Fuzzy Find feature that locates the 32 files most closely approximating search criteria entered in up to four fields.

▶ 1stPORT, priced separately at $95, lets users import and export data in DIF, SYLK, tab- and comma-delimited, or fixed-length ASCII text formats. Alternatively, users can create custom export and import filters by specifying their own field and record separators.

▶ 1stMERGE, a new version of 1stDESK's mail-merge utility, adds the ability to print labels and 1stTEAM reports in any LaserWriter font. The program is available separately at $95.

1stDESK Systems is at 7 Industrial Park Road, Medway, Mass. 02053; (800) 522-2286. □

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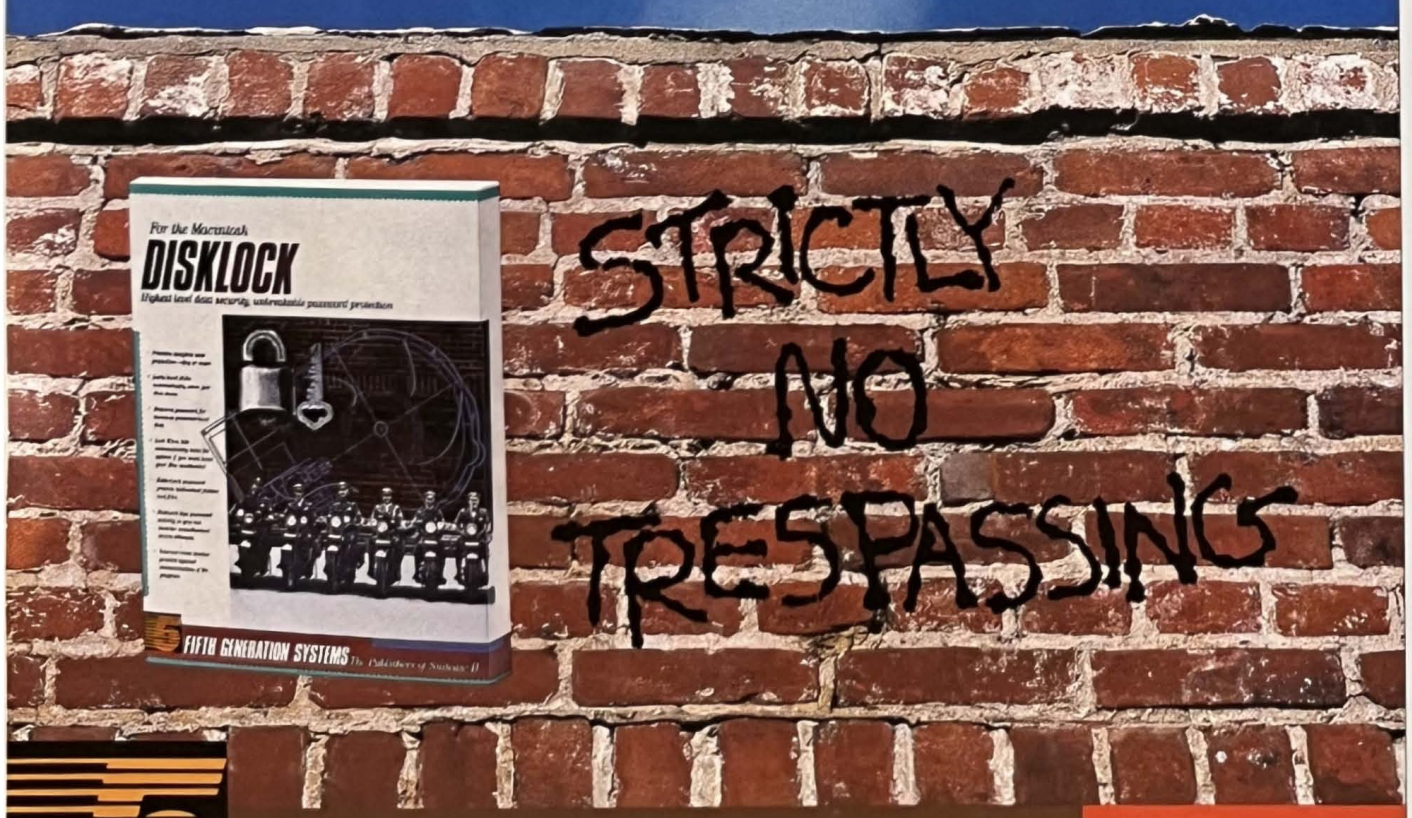

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1stAid for bad disks, trashed files

By Henry Norr

Boston — Although 1stAid Software has frozen its Anti-Virus Kit, the company is by no means dropping out of the Mac utility market (see MacWEEK, Jan. 9). It has recently released two new programs and upgraded its flagship product, 1stAid Kit.

▶ Sector Collector is an application that helps users reduce the risk of losing valuable data when sectors of their hard disk become unreadable. The $49.95 program scans the disk for bad and marginal sectors; copies data from those sectors to a new location so that in most cases the file involved will open normally; and gathers the bad sectors into a special invisible file to prevent the Macintosh from writing data to them.

▶ Complete Undelete, also priced at $49.95, is a Control Panel device that makes it possible to recover inadvertently deleted files (see MacWEEK, Dec. 5, 1989).

The program creates a log on each protected volume to keep track of the location of data from deleted files. It also modifies the disk's Free Map to reduce the chances that the Macintosh will immediately reuse the sectors where such data is located. From the Control Panel, users can preview text extracted from trashed files or undelete the files.

▶ Version 2.8 of 1stAid Kit updates the disk and file recovery utility and its book-length documentation for compatibility with current system software and for integration with Sector Collector. The new release also adds utilities that make it possible to lock hard disks and to repair the Finder's Desktop file without sacrificing Get Info comments. 1stAid Kit is $99.95; a Deluxe version priced at $159.95 also includes Complete Undelete and Sector Collector.

1stAid Software Inc. is at 42 Radnor Road, Boston, Mass. 02135; (617) 783-7118. □

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Cellular unit tops new modem options list

By Carolyn Said

Mountain View, Calif. — Modem makers have recently released a slew of options, such as a high-speed option for mobile telecommunicators and several Macintosh-specific bundles.

▶ Telebit Corp. introduced CellBlazer, a 16,800-bps cellular modem with 19,200-bps capacity on land lines. The $1,495 modem, compatible with most cellular telephones, also is compatible with the V.42 standard and offers Microcom network protocol (MNP) classes 4 and 5 for error correction and data compression.

▶ Intel Corp.'s Personal Computer Enhancement Operation is bundling two of its external modems with MicroPhone 1.5, the $195 communications program from Software Ventures Corp. of Berkeley, Calif.

The 2400EX package sells for $399. The 2400EX MNP package, which includes MNP classes 1 to 5, sells for $499.

▶ Multi-Tech Systems Inc. is bundling three of its modems with Quick Link II, a $99 communications program from Smith Micro Software Inc. of Huntington Beach, Calif. The three modems are the 9,600-bps MultiModemV32, which sells for $1,195, the $599 2,400-bps MultiModem224-E and the MultiModem224E7, priced at $649. All are Hayes-compatible and offer MNP classes 1 through 5. The 224E7 also offers MNP Class 7, for additional data compression capabilities.

▶ Ven-Tel Inc. recently announced a $50 price cut on its Mac2400E internal modem for the Mac II. The 2,400-bps modem, which supports MNP classes 2 through 5, will sell for $399 by itself and for $549 bundled with the $295 Microsoft Works.

Telebit Corp. is located at 1345 Shorebird Way, Mountain View, Calif. 94043; (415) 969-3800.

Intel Corp.'s Personal Computer Enhancement Operation is located at 5200 N.E. Elam Young Parkway, Hillsboro, Ore. 97123-6497; (503) 629-7354; (800) 538-3373.

Multi-Tech Systems Inc. is located at 2205 Woodale Drive, Mounds View, Minn. 55112; (612) 785-3500; (800) 328-9717.

Ven-Tel Inc. is located at 2121 Zanker Road, San Jose, Calif. 95131; (408) 436-7400; (800) 538-5121. □

MacInTax, Quicken bundled

Oxnard, Calif. — Softview Inc. last month announced a $129 bundle deal that combines MacInTax, its recently updated tax preparation package, and Quicken 1.5, the personal financial management package from Intuit Inc. of Palo Alto, Calif. The programs sell separately for $99 and $59.95, respectively.

Softview Inc. is at 1721 Pacific Ave., Suite 100, Oxnard, Calif. 93033; (805) 385-5000. □

V.I.P. interpreter converts PostScript to Scitex format

By Carolyn Said

Bedford, Mass. — The high-end Scitex Response pre-press color system can now work with PostScript files via a new $8,000 interpreter called V.I.P.

Jointly developed by Scitex America Corp. and Adobe Systems Inc. of Mountain View, Calif., V.I.P. (Visionary Interpreter for PostScript) converts PostScript files into Scitex format. The interpreter includes 13 bundled Adobe fonts and is the only software interpreter that currently works with Adobe fonts, according to Laura Janukowicz, Scitex product manager.

V.I.P. is for service bureaus that have Scitex's $80,000 Visionary Gateway system, the bidirectional link between Mac II-based Visionary workstations and Scitex Response.

Visionary workstations, which cost $14,000, incorporate a modified version of QuarkXPress page-layout software from Denver-based Quark Inc. and Bitstream Fontware from Bitstream of Cambridge, Mass.

With V.I.P., users can turn to desktop publishing programs other than XPress, Janukowicz said. "PageMaker users who don't want to change to a Quark-like interface can create pages, save them as PostScript files and output them on the Scitex system with V.I.P."

In addition, Visionary owners who do use XPress will be able to work with Adobe fonts as well as those from Bitstream, she said.

"We have a large customer base entrenched in desktop solutions and Adobe fonts," said George Gunzleman, vice president of Waldman Graphics, a Pennsauken, N.J.-based service bureau that has been beta testing V.I.P. with its Scitex Gateway system. "V.I.P. provides a good alternative for those customers, without the need for additional investment on their part."

One drawback of V.I.P. is its inability to transfer information about most graphic images, according to Gunzleman and Janukowicz.

V.I.P. creates a Scitex file with window boxes in place of TIFF, PICT and PICT2 images, although Encapsulated PostScript images do translate. The missing images must be manually positioned on the Scitex system.

Without V.I.P., Visionary documents transfer to Scitex with hooks that pull in high-resolution versions of graphic images that were positioned and scaled by the workstation user.

Scitex America is at 8 Oak Park Drive, Bedford, Mass. 01730; (617) 275-5150. □

MacSprint II gets 32-bit QuickDraw upgrade

Fremont, Calif. — Orchid Technology last month released a software upgrade for its MacSprint II package, making the Mac II accelerator compatible with 32-bit Color QuickDraw.

Version 2.1 of the MacSprint II software patches an obscure bug in the SCSI Manager in the Mac's ROM, according to Orchid. The new file, a cdev (Control Panel device) and Startup document (INIT), has been mailed free of charge to registered MacSprint II owners.

The $299 MacSprint II card, which provides a 32-Kbyte static RAM cache, speeds Mac II performance by 15 percent to 30 percent.

Orchid Technology is located at 45365 Northport Loop W., Fremont, Calif. 94538; (415) 683-0300. □

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Alarms added to VAX manager

By John Battelle

King of Prussia, Pa. — Integrated Solutions Inc. last month shipped Central System Manager Version 2, a new release of its VAX/VMS system management software. CSM lets a Mac connected to a VAX handle such features as controlling user processes and managing disk resources. New features in Version 2 include:

▶ VMS Alarms. This allows the VAX manager to set alarms for conditions such as low disk space. Regardless of which application the manager is working in, an alarm will sound when such a condition occurs in the VAX system.

▶ Full support for AppleTalk for VMS, in addition to serial links, to access the VAX.

▶ Color support. Special colors can be selected to identify types of windows.

▶ Sorting of information in tabular lists by up to three keys.

Additionally, CSM Version 2 supports custom icons, extended keyboards and tab types in list windows.

"Version 1 worked well," said Martin Light, system manager at Siecor Corp. of Hickory, N.C. "But I really look forward to using the alarms feature in Version 2."

Prices for CSM Version 2 vary depending on configuration but begin at $1,200, according to the company. Upgrades are free if the user purchased Integrated's yearly maintenance program.

Integrated Solutions Inc. is at 1020 Eighth Ave., King of Prussia, Pa. 19406; (215) 337-2282. □

High-capacity drives from PLI

Fremont, Calif. — Peripheral Land Inc. last month introduced a new line of high-capacity hard drives, including a 250-Mbyte unit that the company described as the largest-capacity 3.5-inch internal drive yet marketed for the Mac.

The 250-Mbyte drive, as well as a 200-Mbyte model, are based on a Hitachi mechanism. The series also includes a 100-Mbyte unit available with Toshiba or Conner Peripherals mechanisms.

The 100-Mbyte drive has an average access time of 22 milliseconds, while the larger drives average 20 milliseconds each.

All three capacities are available in external or internal units. Prices range from $1,099 for the internal 100-Mbyte drive to $1,999 for the external 250-Mbyte model. The drives are shipped with TurboWare, a utility series that includes backup, optimizing, print-spooling and RAM-caching programs.

Peripheral Land Inc. is at 47421 Bayside Parkway, Fremont, Calif. 94538; (415) 657-2211. □

SuperScope simplifies lab instrument setups

By Rochelle Garner

Somerville, Mass. — GW Instruments Inc. this month announced SuperScope, a $990 data acquisition software package that combines real-time oscilloscope, XY recorder, strip chart recorder and spectrum analyzer emulation.

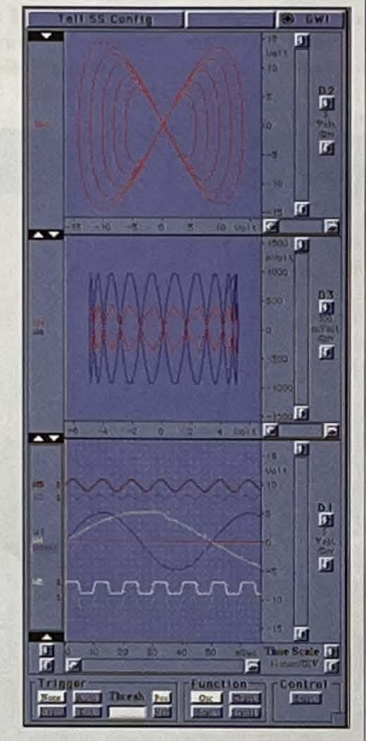
With SuperScope, all programming can be done through dialogs, a feature that makes the system easier to learn and to configure for lab and factory use, the company said.

"We are leveraging off an installed knowledge base because SuperScope already looks like a typical oscilloscope," said Glenn Weinreb, GW Instruments president. "Because programming is done through dialog boxes, people don't have to go through elaborate compiling or software debugging."

According to the company, the software can acquire up to eight wave forms simultaneously and can display up to 50. Wave forms can be edited with a built-in spreadsheet, and a text editor lets users place lab notes in their applications.

SuperScope, which is expected to ship by Feb. 1, supports GPIB (general-purpose interface bus) devices through GW Instruments' MacADIOS 488 interface products.

GW Instruments Inc. is located at 35 Medford St., Somerville, Mass. 02143; (617) 625-4096. □



SuperScope, GW Instruments' new user-programmable data acquisition package, can display up to 50 panels that show data from factory and lab instruments. Here, the top and middle regions emulate XY chart recorders, and the lower third emulates an oscilloscope with seven wave forms.

Templates for PageMaker

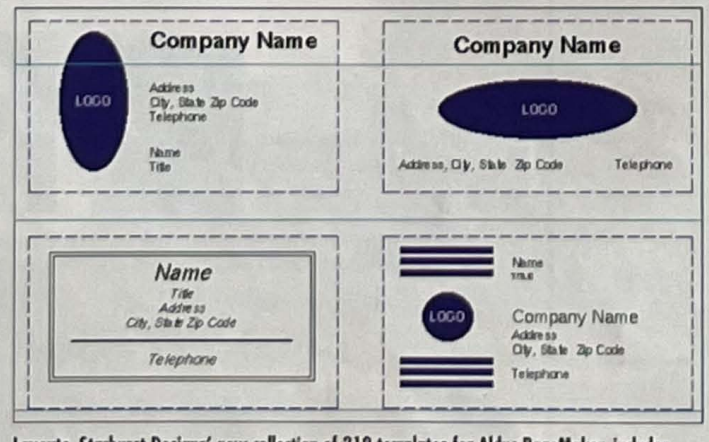
Las Vegas — Promising business users a quick and easy way to make attractive documents with Aldus PageMaker, Starburst Designs Inc. recently shipped Layouts, a collection of PageMaker templates.

The $179.95 packages includes 219 templates for business cards, stationery, envelopes, brochures, newsletters, business reply cards and fliers.

"We have a tremendous workload, with more and more people doing graphics projects on the Mac," said Karen Bartlett, graphics coordinator for Southwest Gas here. "I don't have time to do constant training. This acts as a kind of remote trainer for our people." She added that the templates helped avoid problems with incorrect sizing and crop marks.

A QuarkXPress version is due next month, and Ventura Publisher and Ready,Set,Go! versions are due in the spring.

Starburst Designs Inc. is located at 1973 N. Nellis Blvd., Suite 315, Las Vegas, Nev. 89115; (702) 453-3371. □



Layouts, Starburst Designs' new collection of 219 templates for Aldus PageMaker, includes designs for business cards as well as stationery, envelopes, brochures and newsletters.

Editorial

How Apple can fend off circling vultures

Apple's first-quarter financials aren't in yet, but it is already clear that the company had a rough Christmas. The combination of negative factors — including the apparent failure of the "Free Trial Run or Cash Back" promotion, slow sales of the Mac Portable and the filing of the Xerox interface lawsuit — was so rough that the Wall Street vultures started smelling blood in Cupertino.

Some financial analysts began saying things that would have been unthinkable a few months ago: Apple's momentum has stalled. The Mac is just a niche player in the personal computer industry. Apple's technical advantages have been eclipsed.

All of that is nonsense. Apple today has the same strengths it enjoyed last month and last quarter. The circling vultures are the same IBM PC-oriented analysts who came late in recognizing the importance of the Mac. Their overeager obits are a testament to their earlier lack of insight.

Indecision at the low end. Still, there's no question that Apple has some problems. The low-end members of the Mac product family, the SE and Plus, are 3 and 4 years old and are increasingly looking stodgy and outmoded. By now, Apple should have had new low-end machines in dealer showrooms. Instead, the new models are still many months away. That's too long.

The problem is that Apple failed to recognize a change in industry marketing patterns. While customers once may have expected a three-to-four-year life span for computer models, other companies, especially Compaq Computer Corp., have taught buyers to expect new models every year or so. Apple has begun to catch on (witness the back-to-back intros of the Mac IIcx, IIci and the expected IIxi), but it has not applied this strategy to its entry-level models.

The low-end problem has been compounded by Apple's indecision over how and when to phase out the Apple II. The indecision not only delayed the introduction of low-end Macs but led to neglect of the Apple II. It should have come as no surprise that sales of the Apple II suddenly went belly up this Christmas.

Market share over profit margin. Besides the specific problem at the low end, Apple has a general problem with pricing across the line. The company's success over the past three years lulled it into the comfortable conclusion that customers are willing to pay more for the privilege of using a Mac. It therefore failed to use the window of opportunity created by its technical advantage to substantially enlarge its market share, which today is only marginally higher than it was a few years ago.

Rather than seek to maximize its sales, Apple has used its advantage to produce higher profits per sale. That strategy produced a healthy bottom line in the short run, but it squandered an opportunity to create a long-term advantage with a much larger installed base.

Apple has begun the process of reducing its price structure with the relatively aggressive prices set last year for the IIcx and IIci. This month, it also offered a disguised reduction on the SE and SE/30 with a dealer price cut that was not reflected in the list prices of those models.

These subtle adjustments are not enough. To wake up the market, Apple needs a dramatic announcement of substantial price adjustments across the entire line.

It is certainly not too late to deal with these problems, but Apple must not simply ignore them. The vultures can be sent packing, but only if Apple demonstrates its will by rushing its low-cost models to market, settling on a strategy to phase out the Apple II and announcing an across-the-board price cut. □

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New Media STEVE ROSENTHAL

For really snappy memos, try multimedia lite

For quick and dirty — make that useful but unpolished — multimedia, a Macintosh provides several good solutions that don't require a video camera. While shooting the screen with a standard video setup is sometimes the best and quickest way to distribute presentations that include images, sound and movement (see New Media, MacWEEK, Oct. 24, 1989), in many situations you're better off reaching for the mouse.

What we're talking about here is the visual equivalent of the rough draft or penciled note rather than a presentation designed to influence or entertain.

And while it takes skill to create a professional production, the average business Mac user can make a useful multimedia memo with a minimum of extra tools and hassle.

Starting with pictures. For the typical multimedia memo, you might want to combine a few images, a bit of motion and maybe a little commentary. Say, for example, you want to show the changes in quarterly sales charts, highlight critical parts of a management report, or describe how a new procedure or program is supposed to work.

For pictures, you'll probably use images copied from existing applications or clip art. Just remember, it will probably take longer to scan in images than you planned.

The ever-versatile HyperCard is one choice for presenting these assembled images. You can take clipped images and paste them right into HyperCard, or use the Import Paint function that appears when you select any of the graphics tools. Similarly, you can import the images into Silicon Beach Software Inc.'s SuperCard program.

HyperCard only supports black-and-white images, but if you've progressed to adding external commands (XCMDs), you can turn to one of the several commercial or shareware XCMDs that let you display color pictures from within your stacks.

You can capture black-and-white images with the Mac's built-in Fkey clip operator (Command-Shift-3). For capturing color images, you can choose from a number of commercial and shareware programs.

If you're willing to invest in a special program designed for sequencing and playing back clipped images, there's also San Francisco-based Antic Software's HotSpot — although I think that the program still needs work. Farallon Computing Inc. of Berkeley, Calif., offers ScreenRecorder, which will capture screen sequences as you work and assemble them for distribution or viewing.

You can also use the slide-show functions in presentation programs such as Aldus Persuasion or Microsoft PowerPoint, which might make sense if you've already paid for and learned one of those programs.

Once you have your array of pictures, all of these products will let you rearrange the order, add transitions and captions, or touch up an image. Admittedly, you won't be able to add the complex movements you could have produced with MacroMind Director or the cell-by-cell animation of Linker Systems' The Animation Stand. But you won't have to spend the time to learn those programs or the dollars to buy them, either.

Adding sound. Adding sound is more problematical. While HyperCard and most of these other programs can play back sounds, they don't supply tools for capturing, editing or arranging sounds. The Mac hardware has no audio inputs. And Apple's free MacInTalk speech synthesis program, although fun and even useful for some specialized applications when people cannot read the screen, doesn't provide sufficient output quality for ordinary business use.

If you want recorded commentary for your multimedia memos, you may have to add Farallon's MacRecorder to your Mac. This $249 package will digitize your voice or other sound and compress the result for more-efficient data storage. You can get four minutes of compressed speech on an 800-Kbyte floppy, which might be enough to provide the commentary for a 10-minute presentation.

Using only these more-basic tools may produce only basic results. But sometimes a less-than-professional multimedia presentation says more than a static image on paper. □

Send tips and comments to Steve Rosenthal, c/o MacWEEK, 301 Howard St., 15th Floor, San Francisco, Calif. 94105; AppleLink: Steve.R; MCI: 114-8611.

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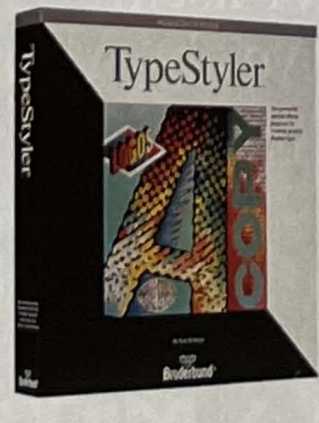

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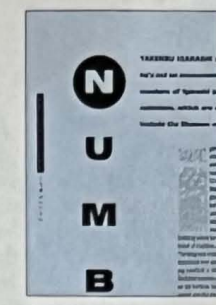
16 January 1990



DTP: 5 years strong.
See Page 26.

MacWEEK interviews Paul Brainerd.
See Page 26.

Macs help launch first U.S. national daily sports paper

By Stuart Silverstone

New York — Armchair sports fans will soon have something else to keep them seated — a daily newspaper. This month's three-city launch (New York, Chicago and Los Angeles) of The National, the first U.S. sports daily, involves all off-the-shelf computer tools, including Mac products combined with higher-end editorial and production systems.

The National uses an editorial system designed by Australia-based developer CyberGraphics. The software runs on 88 Wyse terminals customized by CyberGraphics and operating under Unix, and on 30 Macintosh IIx machines running under A/UX, Apple's implementation of Unix. The customized Wyse terminals perform text editing, wire service capture, copy fitting and black-and-white page-layout functions. More-sophisticated designs and color pages are created in a customized version of QuarkXPress, part of the Scitex Visionary system from Scitex America Corp. of Bedford, Mass., and transferred through a Scitex Gateway Mac hard-wired to the pre-press system.

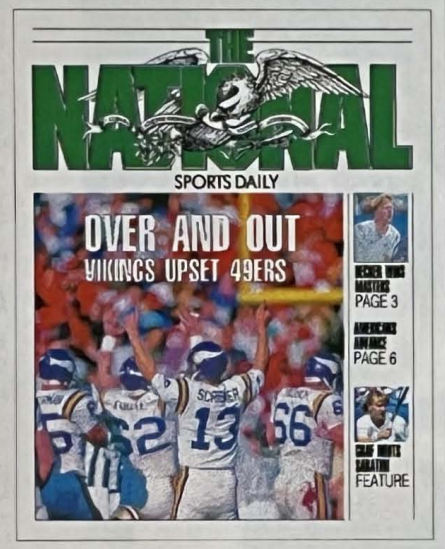
The National's Scitex Response System includes four pre-press terminals that will be used for heavily designed pages and will merge CyberGraphics layouts, Visionary layouts, Mac-generated infographics and high-resolution digital photographs from various sources to produce the final pages.

High-end drum-inkjet digital color printers from Iris Graphics of Bedford, Mass., will provide rough proofs of each page from the Scitex system. Then, Scitex's communications system will broadcast those page files via satellite to RayStar laser plotters at local printing plants — and, within two years, to plotters at an estimated 25 additional sites.

The National's all-electronic publishing system is centered on a VAX 3900 computer acting as a file server, with a DECnet network running AlisaShare to link the Macs to the Wyse terminals and Scitex workstations. Wyse terminals in remote bureaus also are tied into the VAX via 56-Kbyte-per-second dedicated phone lines. Writers at each of the paper's three bureaus use Toshiba laptops with 2,400-baud built-in modems to access wire stories and give their copy to editors.

Photos enter the system as traditional negatives that are captured in low resolution using a video camera linked to Indianapolis-based Truevision's NuVista frame-grabber board on the Mac. Accelerator boards allow a low-

See The National, next page



The National, sporting a 50 cent price tag, hits newsstands next week with eight pages designated for home-team coverage in each target market and 32 pages for national sports coverage.

STEVEN BERGER

Displays: QuickDraw on the refresh

By Ken Milburn

San Francisco — Responding to demands from electronic publishing, CAD and graphic design professionals, two of the "big three" third-party Mac display makers have introduced enhancements to significantly accelerate QuickDraw routines.

Radius Inc. and SuperMac Technology agree on the need for acceleration, but each has taken a radically different approach to speeding up QuickDraw. The third member of the triumvirate, RasterOps Corp., has put its accelerated boards "on hold" pending Apple's blessing of an acceleration standard.

According to Steve Edelman, chief scientist at Sunnyvale, Calif.-based SuperMac, slow refresh of complex two-page, 32-bit screen images is a critical bottleneck for the Mac. Ed Colligan, product manager for color at San Jose, Calif.-based Radius, agrees: "Buyers will simply see acceleration as a must if they're in the full-time graphics, pre-press, video or publishing markets."

Two Radius screen accelerators are now shipping: the general-purpose QuickColor at $795 and the QuickCAD Graphics Engine specifically for AutoCAD, Pegasys and VersaCAD at $1,495. All of the features of QuickColor are included in the more costly QuickCAD product. Both use a 6-mips (millions of instructions per second) RISC (reduced instruction set computing) processor on a separate NuBus card. According to Radius, using a programmable microprocessor for acceleration amounts to insurance against future obsolescence.

In contrast, SuperMac has incorporated a daughterboard in its new Spectrum/24 II 24-bit display card and uses custom silicon ASICs (application-specific integrated circuits) designed to speed particular QuickDraw routines. The Spectrum/24 II with daughterboard is now shipping at $4,495 (about $500 more than an unaccelerated Spectrum/24). According to Edelman, this approach translates into lower cost, higher performance and a spare NuBus slot.

Asked about the danger of obsolescence if Apple decides to implement an acceleration scheme of its own, Edelman said, "We put a lot of time and energy into making sure that our implementation is always going to be upward-compatible."

SuperMac claims some QuickDraw rou-

See Acceleration, next page

The Mac tours with the Rolling Stones

London — When the aging bad boys of rock 'n' roll strutted on stage this fall for their first tour in seven years, they were backed by Mac-produced graphics.

The swirling, rotating shapes featured on the Rolling Stones' new "Steel Wheels" album were created in Aldus FreeHand by 4i Collaboration, a small London design firm.

"With FreeHand we were able to play with geometric elements" to quickly turn out a series of design ideas in competing for the job, said Mark Norton, a partner in 4i.

Mick Jagger, who was obsessed with every detail of the tour and record, according to press reports, selected 4i. The firm then had less than three months to "create a graphic identity for the Stones," Norton said.

Fragmented shards of the original logo appear throughout the stage set and on a range of "Steel Wheels" merchandise, from T-shirts to jackets.

"The Mac provided a creative tool to explore all kinds of ideas, do the actual production work and minimize the number of people on the job," Norton said. — *By Carolyn Said*

The National

From previous page

resolution scan in one-third of a second. After a photo editor working on a Mac selects a picture, its negative is scanned in at high resolution on the Scitex system. The Scitex then automatically sends a low-resolution image to the Visionary system or CyberGraphics Wyse terminals for scaling and cropping during page makeup and replaces the image with a high-resolution version for production output.

Wire photos are captured by The Associated Press' DOS-based Leaf terminals, which are equipped to accept AP signals for wire photos and hard-wired directly into the Scitex system. Slides and color and black-and-white negatives from remote bureaus are scanned locally on a Leafax Scanner, compressed and then transmitted over standard phone lines to New York. For important, late-breaking sporting events, images are captured with a Sony Mavica still-video camera and sent over standard phone lines via a portable transmitter that delivers images to the Scitex system in New York within four minutes.

Tim Lasker, The National's director of operations, is especially enthusiastic about the future of digital photography: "It's going to be one of the greatest breakthroughs in journalism when we can use it on a daily basis. Film is out the door in another two to three years."

Artists using Illustrator 88 from Adobe Systems Inc. of Mountain View, Calif., or Aldus FreeHand from Aldus Corp. of Seattle create infographics, which are then passed through VIP, Visionary's PostScript interpreter, to the Scitex system. Black-and-white page layouts created on CyberGraphics' customized Wyse terminals are transferred via a GPIB (general-purpose interface bus) board into the Scitex, using the Scitex Whisper Handshake.

Layouts designed with Visionary involve Scitex's STIL (Scitex Text Information Language), which sends text block information to CyberGraphics terminals for hyphenation and justification to the parameters and formats created in Visionary. An editor then adjusts the copy on the CyberGraphics terminal, which automatically marries the text with the Visionary layout.

The National is implementing a customized electronic database system that is essential, according to Lasker, to track the status of every story and page in the 48-page daily. "I have to know constantly what's still alive and what needs to be finished," said Lasker. "This technology is the only way we could have pulled it off with timeliness, given the late-breaking stories every night and printing at multiple sites."

If close to $10 million seems expensive for this high-technology playpen, consider the $100 million or so Emilio Azcarraga, The National's owner as well as owner of Televisa, the largest media conglomerate in Mexico, has invested in the overall publishing experiment. And what about future costs due to fast-changing technologies, given Lasker's desire to innovate? "I'm trying to stay on the leading edge of technology and produce a product in a timely fashion, with the best quality," he said. "That means I can't be stuck with one way of doing it. If someone comes along tomorrow with a better tool, I'm going to use it." □

Acceleration

From previous page

tines are up to 25 times faster when executed by the Spectrum/24 II. Radius claims speed increases of only four to six times. Colligan said, however, that Radius' product is a match for SuperMac's Spectrum/24 II in practice if not in theory. "But, I don't think speed is the issue," Colligan added. "I think adaptability is."

And with rumors that Apple is working on setting some acceleration standards, Colligan said he feels Radius is on the right track. "If the rumors are true, they seem to at least legitimize Radius' approach in using a programmable microprocessor."

Taking yet another approach, RasterOps has decided that it's smarter to follow Apple's eventual lead. According to Scott Broderick, product manager for color at the Cupertino, Calif., company, RasterOps prefers to invest development resources in lower-cost true-color display and in calibration of on-screen color. "We feel that the acceleration issue must be addressed by Apple. And they have plans for doing that, but it will be somewhat co-dependent on the release of System 7.0," which is expected this summer.

Faced with these options, some buyers such as Art Guerrero, director of creative computing at Los Angeles-based Eisaman, Johns & Laws Advertising Inc., are adopting a wait-and-see attitude. Of the 80 Macs in Guerrero's office, only two or three are used for true-color scanning for client comps and prepress work. The files for such images are so large, according to Guerrero, that screen redraw time is just "too painful unless the display is accelerated. Those users have, or will have in the near future, accelerated displays."

"Of course," he added, "acceleration makes all QuickDraw operations on the Mac more interactive so there is an ultimate advantage for all our users, but we'll wait until standards are set, prices come down and for acceleration of eight-bit as well as 32-bit displays." □

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DTP: 5 years old and still going strong

By Pamela Pfiffner

Mac enthusiast David Biedny remembers the moment he first knew the Mac was going to change the way people related to the printed page.

"In late 1984 Apple sent out a memo to dealers, and at the bottom of the letter Steve Jobs wrote, 'This was printed on an insanely great peripheral we are about to announce,' " said Biedny, who went on to become a desktop publishing specialist at MacUser magazine from 1985-86.

The peripheral was the Apple LaserWriter with Adobe Systems Inc.'s PostScript page description language running on the spiffy new Mac 512K. After its introduction in January 1985, publishing was never the same.

James Cavuoto, editor and publisher of MicroPublishing Report of Torrance, Calif., a monthly newsletter dedicated to personal computer-based publishing, was an editor at Lasers and Applications magazine in 1984. "I was used to covering these $100,000 printers, and somebody told me that Canon was working on this product using diode lasers that would go to OEMs for under $1,000," Cavuoto recalled. "I said, 'I've got to get this. I could start my own publishing company.' "

Cavuoto hooked an IBM PC to his first LaserWriter, then priced to end users at $6,999, and wrote a PostScript program. "I got it to print a column of justified text," he said. "It was really exciting." Shortly thereafter, Cavuoto bought a Mac and began producing MicroPublishing Report with beta versions of a new piece of software called Aldus PageMaker.

The LaserWriter's 300-dpi Canon print engine freed users from the crudeness of dot-matrix output and the text-only constraints of daisywheel printers. But the combination of the PostScript page description language in the LaserWriter's ROM and the Apple LaserWriter printer driver in the Macintosh made complex, typed-in commands unnecessary. Whatever users drew on the screen — text or graphics — would be translated to the printed page.

Page-layout software: The first wave. While Apple was nailing down the hardware end of desktop publishing, software companies were jostling for position.

Three page-layout programs were touted at the first Macworld Expo in January 1985.

See Desktop publishing, Page 28

A thumbnail view of five years of DTP

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PageMaker 3.0, $595 (March '88)
Automatic text flow
User-defined style sheets
Text wraparound
Image control (contrast, brightness, density)
Spot color
Half-point fonts (3.02)

PageMaker Color Extension for PageMaker 3.0, $195 (March '89)
Pantone color support
Support for OPI

QuarkXPress

QuarkXPress 1.0, $695 (March '87)
Spot color
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Text scaling
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QuarkXPress 1.1, free (November '87)
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Find/Change attributes for style
Quarter-point font sizes
Leading default options
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Copy protection removed

QuarkXPress 2.0, $795 (July '88)
Style sheets
Process color separations

QuarkXTensions (January '89)
Tools allowing third parties to add modules

QuarkXPress 2.1, $15 (March '89)
User-definable kerning tables
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RSG 4.0, $495 (September '87)
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Smart Duplicate
Word spacing

RSG 4.5, $495 (October '88)
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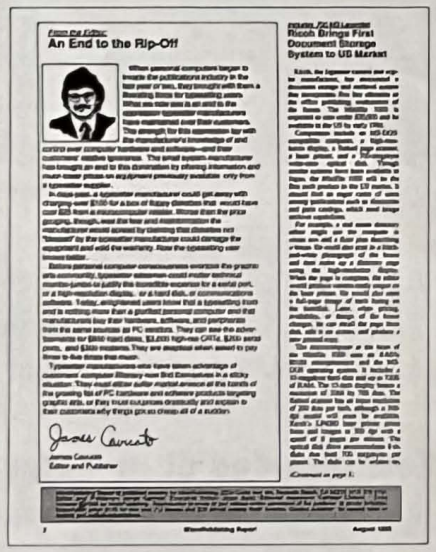

From the Editor:
An End to the Rip-Off

Ricoh Brings First Document Storage System to US Market

Jaces Cavuoto
James Cavuoto
Editor and Publisher

Created using a 0.9 beta version of Aldus PageMaker and Microsoft Word 1.5, this issue of MicroPublishing Report (right) was, in 1985, at the DTP leading edge. James Cavuoto's picture, at right, is an image-grab off a video camera using Koala's Mac Vision digitizer. The newsletter was output on an original LaserWriter.

NUMBERS

Amparo del Rio designed and produced this issue (below) of "Apple Ink" (November 1989) on a Mac SE using Microsoft Word, Aldus FreeHand and Aldus PageMaker 3.0. Pages were proofed on a LaserWriter IINTX and output on a Linotronic 1200. She used an HP Scanjet to scan in all her photos and art, including the pattern shown behind the photo (below), taken from a Japanese print and traced in a PICT file in PageMaker.

Brainerd: The desktop is publishing world's environment of choice

By Carolyn Said

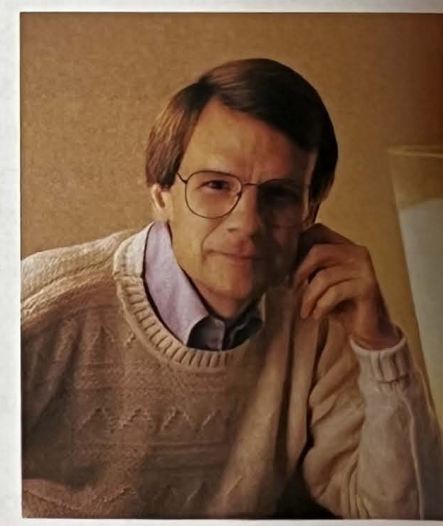
If the desktop publishing revolution has a spiritual father, it may well be Paul Brainerd, founder and president of Seattle-based Aldus Corp.

In July 1985 the company released Aldus PageMaker, which, with the Apple LaserWriter, sparked the desktop publishing revolution and helped to turn around the Macintosh's sagging fortunes, according to many industry experts.

Brainerd coined the phrase "desktop publishing," envisioning a software tool that would use microcomputers and laser printer technology to produce high-quality documents efficiently and inexpensively.

Aldus' founder has an extensive background with dedicated publishing systems, including several vice president-level positions at Atex Inc., developer of dedicated systems for newspapers and magazines.

PageMaker, which now faces a flock of competitors, remains the best-selling page-layout program for the Macintosh. Aldus' other Mac products include Color Extension, which increases PageMaker's color capabilities; Persuasion, a presentation package; and FreeHand, a drawing program. In November the company announced Aldus PrePrint, a color separation and editing program set to ship in mid-1990.


Paul Brainerd, founder of Aldus: The man who coined the term "desktop publishing."

MacWEEK: How do you think the DTP industry has changed in four and a half years?

Paul Brainerd: Clearly, desktop computing is the environment of choice in publishing. Professional publishing organizations are either already there or they're planning over the next year to two, three years to replace their old dedicated equipment with desktop machines. And the excitement to me is seeing what impact we've had on people's ability to communicate.

MacWEEK: Do you see the two cultures of traditionally produced publications, such as newspapers and magazines, and desktop publishing coming closer together?

Brainerd: Yes. Again, what we're provid-

See Brainerd, Page 30

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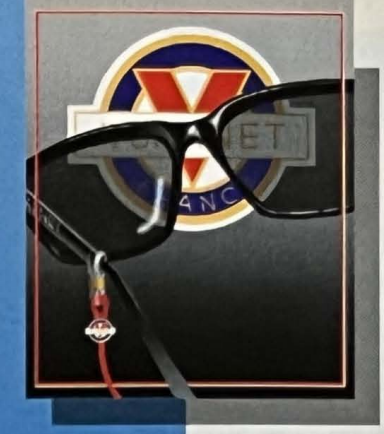

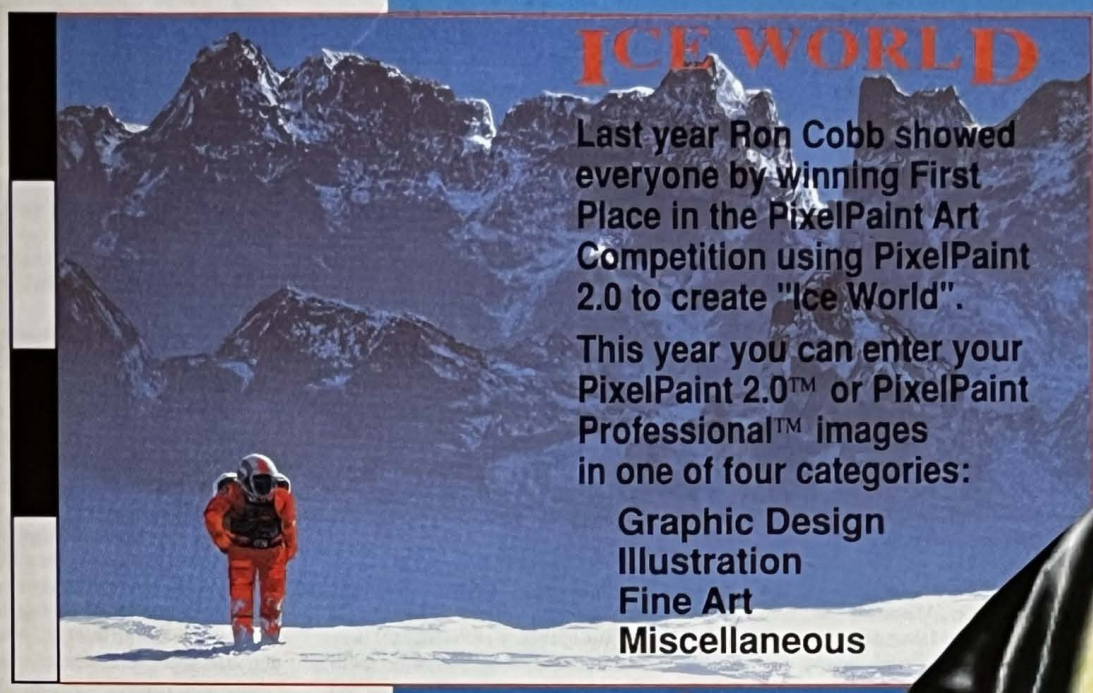

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Frog by Pat Coleman and Ice World by Ron Cobb using PixelPaint 2.0. All others images by Claire Barry using PixelPaint Professional.

Desktop publishing

From Page 26

Aldus Corp. announced PageMaker while Manhattan Graphics Inc. introduced ReadySetGo. Down on the floor of San Francisco's Civic Auditorium, Boston Software Publishing hawked MacPublisher, whose overly enthusiastic use of the Macintosh's graphic interface may have led to its early demise. (MacPublisher was purchased by Letraset in 1986 for incorporation into a program called LetraPage, which never shipped. Letraset also acquired marketing rights to the then-renamed Ready,Set,Go! in 1987.)

Although Ready,Set,Go! reached customers first, PageMaker, which shipped in July 1985, became synonymous with desktop publishing, a term coined by Aldus founder Paul Brainerd in 1984 (see interview, Page 26).

Although Ken Abbott, president of Manhattan Graphics until 1988, said that PageMaker won widespread acceptance because "then it was a better-engineered product" that had Apple's endorsement, many designers said it succeeded because of its pasteboard metaphor. (Ready,Set,Go! employed a boxed-grid approach instead.)

While many designers were leery of this new technology, most recognized that PageMaker fostered experimentation. "PageMaker was close to the normal process of what someone would do to put together a publication, like putting things on a drafting table," said Eda Warren, a Chicago-based graphic designer who is now an authorized Aldus trainer.

PageMaker's visual approach contributed to its market dominance. "When you move the block of type in PageMaker, you see the type move, not just a block," said Biedny, who now works with multimedia in New York. "No one else was doing that. Talk about WYSIWYG — that's what it was all about."

Using Ready,Set,Go! for the first time, designer Laura Lamar created this ad for Bay Commercial Lighting with Version 3.0 in the spring of 1987.

Linotype resolves output question. While the LaserWriter was a significant improvement over dot-matrix printers, designers accustomed to typeset output could not reconcile themselves to the LaserWriter's lower resolution. It may have been OK for in-house newsletters, but it was unacceptable for professional purposes, they believed. Linotype Co.'s decision in September 1985 to support the PostScript page description language on its 1,270-dpi imagesetter, the Linotronic 100, was a major breakthrough. Several months later, the company came out with the 2,540-dpi Linotronic 300.

High-resolution imagesetters showcased PostScript's resolution and device independence, which allowed users to print the same page on several devices. Pages could be printed on a LaserWriter without losing formatting or placement and proofread before being output on the Linotronic.

Christine Thompson, Apple desktop publishing marketing manager, acknowledged that the imagesetter brought a seriousness to desktop publishing. "Linotype's support took desktop publishing from the realm of near-typeset quality to typeset quality," she said.

Design professionals were not the only ones to benefit from the Mac's link to high-resolution — and high-cost — imagesetters. Service bureaus sprang up overnight. Users looking for more-refined output could go to a shop and print on Linotype or Varityper output devices costing tens of thousands of dollars. As a result, general users became more design savvy and product literate, which had interesting repercussions.

"When Apple started implying that you don't need to know design and you don't need a printer, that's when professionals got insulted and became a lot more serious about desktop publishing," said Lori Small, vice president of Design & Type, a San Francisco service bureau that was founded in December 1985.

What's your type? With improved output, the typographic limitations of the Macintosh were glaringly obvious. At traditional type houses, designers luxuriated in vast font libraries and special typographic effects. When Adobe released its first set of Macintosh fonts in March 1986, Mac designers saw the beginning of the long road to reaching parity with their traditional counterparts.

The demand for increased typographic control led to the creation of QuarkXPress. Released in March 1987, Quark Inc.'s page-layout program has more typographic flexibility and precision than PageMaker. Tim Gill, who founded Quark in 1981 to develop word processing software, said that QuarkXPress grew out of the need he perceived for more-refined tools.

"We saw that there was a high-end part of desktop publishing that needed to be addressed," said Gill, now senior vice president in charge of R&D at Quark. "The products that were out there weren't sophisticated enough to serve that market."

The development of QuarkXPress was furthered by the implementation of fractional width spacing and by the provision for kerning pairs in Apple's newly defined FOND resource in 1986, Gill said.

That same year, Altsys Corp. introduced Fontographer, a program for creating or mod-

A LETTER FROM
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Volume No. 1007

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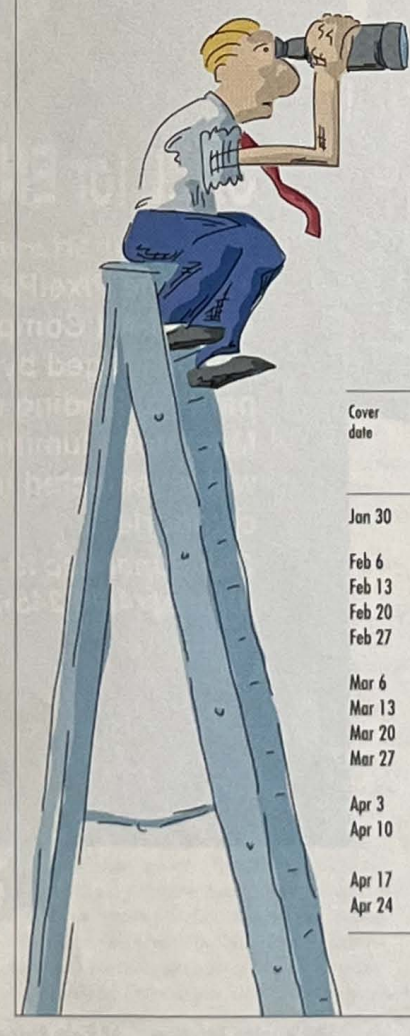

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Jan 30	**GA**	Jan 19	Jan 16
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Feb 13	**Gateways**, Monitors	Feb 2	Jan 30
Feb 20	Portable software/peripherals	Feb 9	Feb 6
Feb 27	**GA**	Feb 16	Feb 13
Mar 6	**GA**, E-mail	Feb 23	Feb 20
Mar 13	**CAD**	Mar 2	Feb 27
Mar 20	**MacWEEK 200**, Printers	Mar 9	Mar 6
Mar 27	**GA**	Mar 16	Mar 13
Apr 3	**NeXT**, Modems	Mar 23	Mar 20
Apr 10	**Storage Supplement**, Software development	Mar 30	Mar 27
Apr 17	Expansion boards	Apr 6	Apr 3
Apr 24	**GA**	Apr 13	Apr 10

ifying PostScript type. Fontographer helped to raise the awareness of the term "Bezier curve" among Mac-based designers, presaging the full-featured PostScript drawing programs to come.

Graphics and industry file formats. Drawing programs that created object-oriented graphics provided designers with important desktop tools. MacDraw, developed by Apple and now marketed by Claris Corp., brought object-oriented graphics to users in 1984.

On the next level was Adobe Illustrator, released in March 1987, followed in February 1988 by Aldus FreeHand (developed by Altsys). Both were designed specifically to take advantage of PostScript.

"Illustrator did for artists what PageMaker did for layout people," MicroPublishing Report's Cavuoto said. Files created in Illustrator and FreeHand could be saved in Encapsulated PostScript format, a universal file format introduced in April 1986 that allowed placement of PostScript-generated art in most page-layout programs.

While object-oriented graphics software freed designers from the dreaded "jaggies" inherent in bit-mapped paint programs, input devices like scanners helped translate rough pencil sketches into polished computer art. Early scanners read only black-and-white information, but the eight-bit scanners that followed recognized up to 256 levels of gray, bringing photographic images under desktop control.

TIFF, released initially in 1986 and championed by Aldus, was quickly accepted as the industry standard format for scanned images.

"Before the invention of TIFF, every vendor in the world had a different file format," Gill said. "TIFF made it possible for users to share file formats."

Letraset's ground-breaking ImageStudio, released in November 1987, let users edit or retouch photo-realistic images. Silicon Beach Software Inc.'s Digital Darkroom, released in August 1988, took gray-scale image editing to new heights. But the new frontier of color beckoned.

MacWEEK

INSIDE

Desktop publishing: Developers battle in offering features

Mac II off the docks

Volume shipments limited until summer

Mac ZOOM IN

MacWEEK's second cover, May 18, 1987, was created in QuarkXPress 1.0 just two months after its release.

This illustration, created in MacPaint, appeared in the July 1985 issue of Macworld. The magazine's designers were experimenting early on with Mac-generated artwork.

Somewhere over the rainbow. When the Mac went color in 1987, designers hungered for software and hardware that would let them realize the color capabilities of the new computers. Equipped with new video boards and large-screen color monitors, Macs went from eight-bit color, or 256 colors, to 24 and 32 bits, a spectrum of 16.8 million colors. New color paint and image editing software appeared, such as Electronic Arts' Studio/8 for eight-bit images and SuperMac Technology Inc.'s PixelPaint Professional for 32-bit images, among others.

In 1988, key graphics software such as Adobe Illustrator 88 and Aldus FreeHand 2.0 incorporated the Pantone Matching System, a print industry color-definition standard. Page-layout software began to address color pre-press operations as well. QuarkXPress has hooks for importing and separating color images. PageMaker with Color Extension and Letraset's new DesignStudio can display and edit color image files, but both require additional separation utilities. Meanwhile, Adobe's 24-bit color image processing package, Photoshop, has incorporated impressive color separation capabilities.

But color input and output devices are still in their infancy compared with the high-end color systems used in traditional pre-press houses. While problems exist in producing color separations directly from the Macintosh, QuarkXPress, PageMaker and Ready,Set,Go! have links to such high-end systems as those from Scitex America Corp., Crosfield Electronics Ltd. and Hell Graphic Systems Inc. Aldus has also created the Open Prepress Interface (OPI), a standard that lets pre-press vendors generate four-color separations of Mac-produced documents containing color TIFF images.

Chief among the problems facing Macintosh desktop publishers making the transition to color pre-press technology is the difference between the monitor screen and printed page. "I have to remind people that as long as it's on the screen, it's only TV color," said Marjorie Spiegelman, a San Francisco designer who created the original look of Macworld and Publish! magazines.

See Desktop publishing, next page

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Desktop publishing *From previous page*

Monitor calibration systems and Pantone color might alleviate color problems, but many designers say that when it comes to color separation, whizzy software cannot replace human expertise.

Who needs kerning in 0.001-em increments? In the five years since its introduction, DTP technology has clearly changed, and so has the market it addresses.

"The DTP market is bifurcating," admitted Apple's Thompson. On one end are less demanding users like corporate information officers, small-business owners, and church and school publication directors; on the other end are publishing and design professionals.

New developments in desktop publishing are primarily geared toward design professionals. As a result, however, users with simpler needs are often bewildered by the choices and high prices of the more sophisticated programs. The "big three" page-layout programs have gravitated toward the professional market; a new generation of low-end page-layout products, such as Silicon Beach's Personal Press, Springboard Software Inc.'s Springboard Publisher and Timeworks Inc.'s Publish-It!, are stepping in to fill the void.

"I'm afraid the low-end market is getting ignored," Spiegelman said. "The main problem is education." Spiegelman, along with other designers, said she believes that anyone who uses desktop publishing needs to learn basic design skills in addition to mastering the Macintosh.

But, in spite of sometimes scathing aesthetic critiques by design professionals of the efforts by amateurs to use these new tools, wide-eyed enthusiasm for desktop publishing is prevalent among both pros and neophytes. Desktop publishing continues to provide increasingly powerful capabilities for professionals and is still raising the level of design sophistication of more-casual users.

Far from being obsolete, Apple's original concept of desktop publishing still holds true at both the high and low end, Thompson said. "The individual can control the form and content of his messages." □

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Brainerd *From Page 26*

ing are tools on the desktop. For the most part, [newspapers and magazines] are not buying any more dedicated terminals based on proprietary architectures.

All their new people have been using PCs in one way or another integrated with the existing dedicated systems.

They have some compelling reasons to buy a standard [personal computer] platform: price advantage plus the ability to run other applications on that machine.

MacWEEK: How will computer publishing change to meet the needs of users of traditional systems?

Brainerd: It is [changing]. There are still issues, clearly, but with each new release of our software and our competitors' we address a wider range of publications and their needs. With each new release we've had more professional typographic characteristics, we've made the products easier to use in some respects, and we've also added more professional features. And we're now getting into color in a big way.

In many cases we're even better than what could be done with a traditional system.

MacWEEK: In what ways?

Brainerd: In the typographic area in the degree of precision, the interface in particular. Thinking back to my old days at Atex: You had to memorize all these mnemonic codes, two-character combinations — boy, you had to be an expert at doing that! And today we have more than 300,000 users who just go to the Text box dialog and push a couple of buttons and get the same result.

MacWEEK: Do you think there are clear distinctions among different customer groups — the graphic artists need one thing and corporate people need another?

Brainerd: Like any natural evolution of something that's been successful, the market gets segmented as it matures. So there will be needs for specific solutions — for example, color. With Aldus PrePrint, we're providing a solution for those people who need color because they do color separations. By no means is that all of our customer base. But there are several thousand people who desire that solution.

MacWEEK: Do you see PageMaker at some point splitting into lower-end and higher-end versions?

Brainerd: We have not yet done that. We certainly see potential for that if we get feedback from customers that that's what they want to do.

MacWEEK: What do graphic artists want? Do you think the high-end design community is satisfied?

Brainerd: [Customers are] constantly giving us feedback on what could be improved. With PageMaker 3.0, for example, our wish list [totaled about] 350 different

requests for enhancements. And through some formal market research as well, what typically occurs is that 15 or 20 of those items float right to the top. Then our engineering group takes those as the requirement for the next release.

MacWEEK: What specific features have floated to the top of the list of late?

Brainerd: I'm not going to talk about PageMaker's next release. But things like search-and-replace and spell checking we will incorporate in our next release.

MacWEEK: What will it take for OPI (Open Prepress Interface) to become an industry standard the way TIFF has?

Brainerd: In publishing the standard then (in March 1989), we have this interim period where we're working with at least six or seven different implementations. OPI for the most part will conceptually interface with the high-end systems: Crosfield, Hell, Dainippon and all the others.

By first quarter we expect to have quite a number of them actually in operation. I think it's a great interim step, a bridge between desktop and the traditional world that was out there and could not speak PostScript. I mean, there's a reason why there are [color pre-press systems] there — to create high-quality color. And there's still a number of issues on the desktop level (scanning input, processing and output) that are not equal to what can be done on the Hell system, for example.

MacWEEK: Do you think it will be possible to actualize the intermediate file format that was briefly discussed at Seybold (by you; John Warnock, CEO of Adobe Systems Inc.; John Meyer, president of Ventura Software; and Fred Ebrahimi, CEO of Quark Inc. (see MacWEEK, Oct. 31))?

Brainerd: John [Warnock] was proposing an engineering discussion to explore the technical feasibility. Our engineers have followed through on that, and meetings are being set up to pursue it. At this point it's premature to make judgment on it because we don't even know what it is yet. John was very clear in that session that he needed our input.

MacWEEK: What do you think about the Royal vs. Adobe Type Manager controversy?

Brainerd: We will support both because we would like the way in which they are being implemented to be compatible. We already [support] Adobe Type Manager, for example.

I think that the customers will decide on a lot of factors, including the quality of the implementations. It's basically waiting to see how they are implemented, how many fonts are editable in each of the formats, what the quality of the output is in respect to that.

At this point we have to take it as a given that there will be two font standards, the Adobe Type 1 and the Royal. It will be a competitive environment, and that can be viewed as good by many people. It may be a bit more confusing, depending on how the vendors implement it. I'm hopeful that the vendors will be sensitive to the fact that they need to keep it as transparent as possible for the customer.

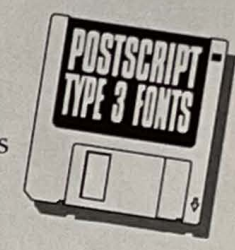
MacWEEK: Could you make some predictions for changes in the industry by the turn of the century?

Brainerd: Obviously, the machines are going to get faster and more capable.

The increased use of color. I think we'll look back in 1993 or 1995 and wonder about the black-and-white world that we used to be in here. The cost of color printing devices is coming down. The availability of color copiers in the office, I think, will have a big impact on people's perception of color in a normal everyday sense. And some of the things that we're already doing in a publishing context with color obviously will extend to a wide range of applications.

The whole idea of work-group computing and work-group publishing. Today we're still viewing the PC as an individual productivity tool. That's not exclusively true, but clearly the networking of computers and doing more than electronic-mail transfers and printing over the network [will be important]. That is, keeping track of all of your jobs. Like a publishing project — who has what, what has been proofread and what hasn't been proofread. The desktop computer [will be] part of running the business in a total sense, all people cooperating and using the computer as a tool.

The most fundamental issue, I think, of all these things in the 1990s — and I've said this several times — is not the technology but the people. Our ability to understand these new tools, learn, adapt, teach ourselves, changing the ways in which we work and our willingness to do so will determine the success of the impact of desktop publishing and computers in the 1990s. We have more technology than we know what to do with in most cases. People are still scared when a computer comes into their office because it will change the way they work. It's threatening. It's change. Therefore I think the human values associated with this need more attention than they've gotten. We really need to look at where we're going to go with the technology. □

A WORLD OF TYPE AND LETRASTUDIO. New Version 1.5 of the professional display typography program now handles 

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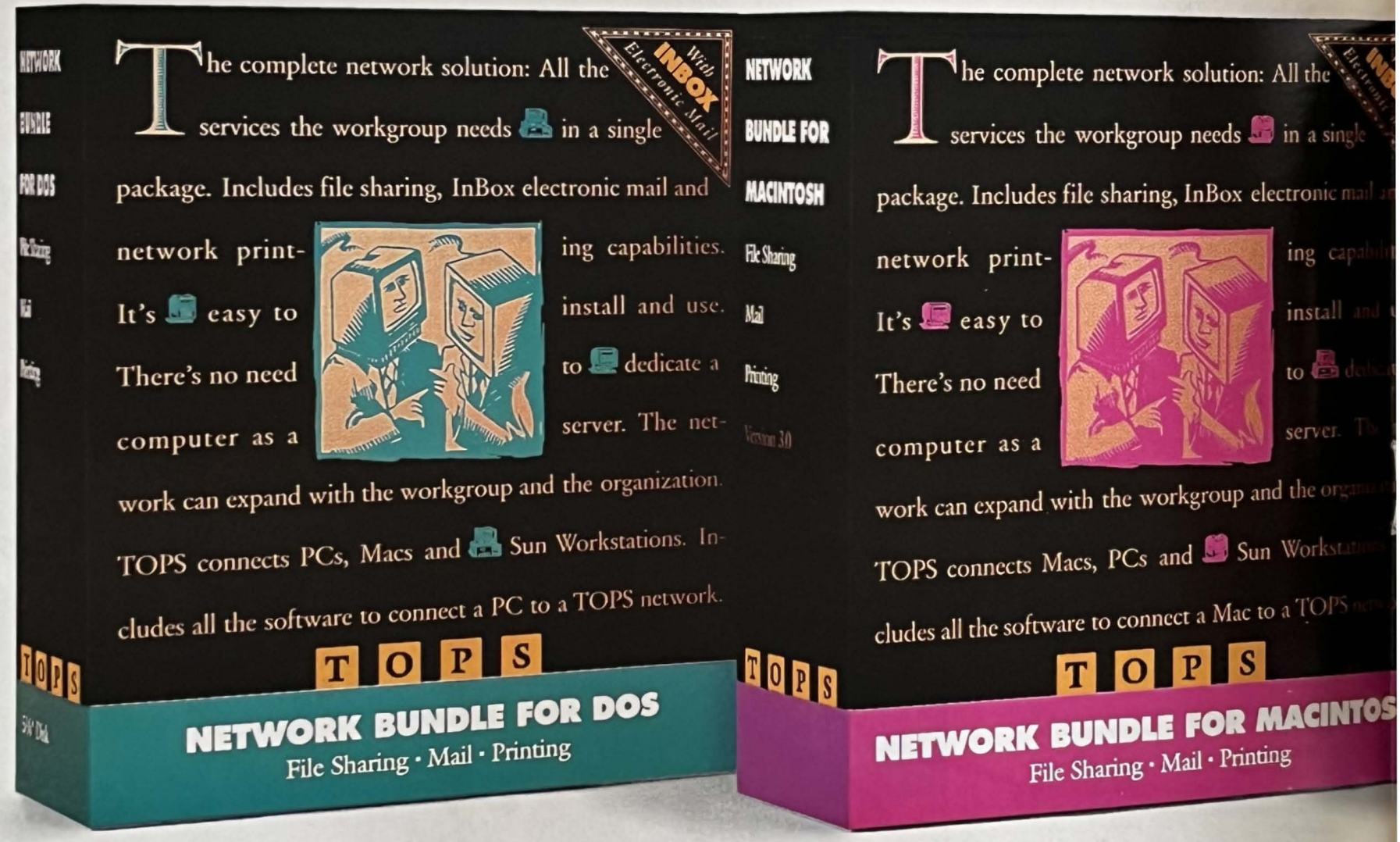
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The Cutting Edge LASLO VESPREMI

Work space lighting: Paint it black?

Advances in color on the desktop have suddenly thrust the need to correctly calibrate screens to center stage. Monitor calibration is sometimes pointed to as one of the crucial tasks on the road to color publishing. But is calibration enough? The eyes say no.

So far, two color calibrators have appeared on the Mac scene. One was developed by Barco Inc., a Belgian company with its U.S. headquarters in Smyrna, Ga., and was licensed and marketed by RasterOps Corp. of Santa Clara, Calif. The other was developed and marketed by Radius Inc. of San Jose, Calif.

So far, so good. Unfortunately, monitor calibration by itself may not guarantee correct conditions for such demanding tasks as retouching or color correction. The problem is that the human eye sees color in the context of other colors and corrects automatically for different conditions. This writer participated in a series of tests of this phenomenon, in which the effect of different kinds of surrounding light was explored. It was an interesting, if a little disheartening, experience. Ambient light has a tremendous effect on our color perception and thus our ability to match colors correctly.

This screen is a composite of the same color image, corrected by the same operator with the same monitor and software to demonstrate the effect of ambient lighting on color perception. The top-left image is the original scanned image, the top-right image was produced under incandescent lighting, the bottom-left image under fluorescent lights and the bottom-right image under natural light.

Worse than that, the eye also remembers colors. Edward Land, founder of Polaroid, conducted a number of tests of human color memory in the 1950s. He repainted familiar objects in unfamiliar colors (such as purple for a lemon) and placed them in artificial environments. Land documented that the human eye went to considerable trouble to see memory color, such as seeing the purple lemon as yellow.

The upshot is that calibration alone cannot solve the problem of correctly presenting colors on screen. Equally important is that surrounding light conditions be controlled or at least compensated for.

But how? Engineers at Scitex America Corp. of Bedford, Mass., have spent 10 years trying to solve this problem, and so far they haven't completely succeeded. Their solution is to place the monitor in a semidark room with non-reflecting, dark, neutral walls. If you add the recommended temperature controls, you get a less-than-pleasing work space to contend with as well.

More to the point, what is a reasonable investment for million-dollar equipment may not be practical for the majority of color desktop publishers. Short of building expensive, dark rooms, there is something that could work: The Constant Distortion Principle.

Set up the monitor in a room with constant — meaning artificial — lighting conditions. Study and be aware of the changes this light causes in your color perception, and make allowances for it when color correcting. Once you're familiar with this constant effect, it will become second nature to correct for it. For example, if your setup is under a bluish fluorescent light, your eyes will tell you to overcorrect and add more yellow and red to compensate. If you know this, with a little experience you can learn the amount of extra yellow and red you need to deduct or blue you need to add, to balance the effect of the surrounding light. In the case of incandescent lights, you need to go the other way, taking away blue to correct for the warm nature of the light.

This sounds complicated, and it is difficult. But for the moment, it is the best that can be done. Happy coloring! □

Laslo Vespremi, a longtime desktop publishing guru, works at Electronics For Imaging Inc., a San Bruno, Calif.-based company specializing in color technology.

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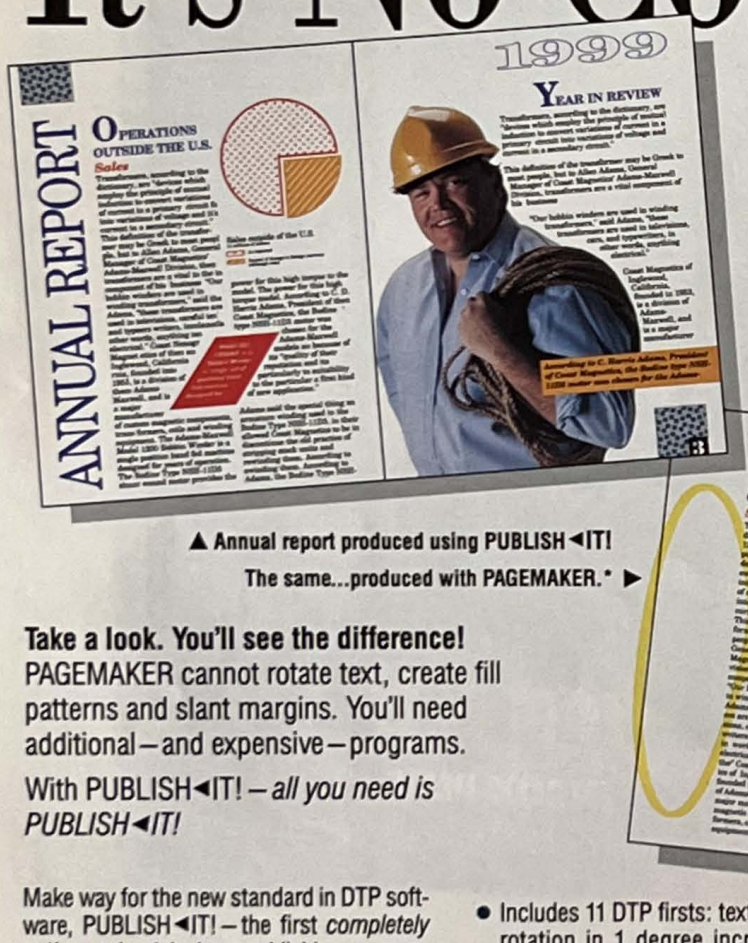
INFO WORLD EXCELLENT VALUE Sep. 4, 1989



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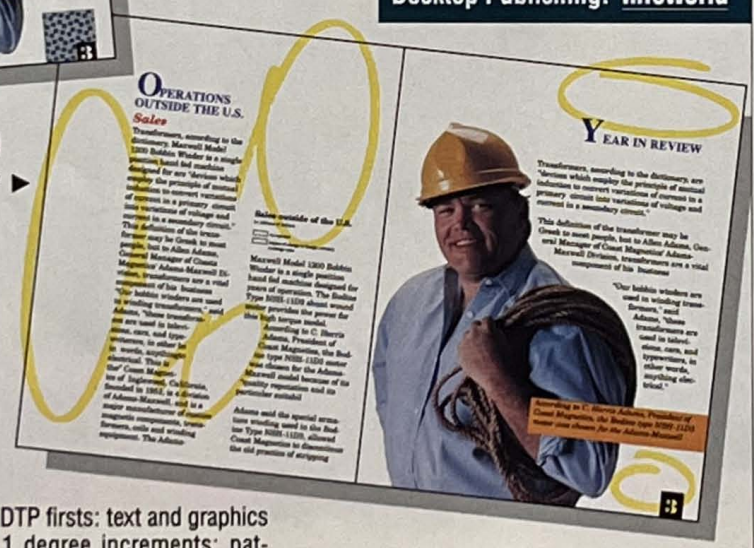

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Boldface EZRA SHAPIRO

Desktop publishing power to the people

When the term was first coined, "desktop publishing" carried a hefty price tag in the Macintosh universe. The minimum requirement for high-quality output was a PostScript laser printer, a Mac, cables, software and fonts. If you threw in faster processing speed, a hard disk and other goodies, you were looking at nine or 10 grand just to start. The arrival of QuickDraw laser printers like the GCC Personal LaserPrinter and the Apple LaserWriter II SC lowered the outlay considerably, but these machines' limits on font usage kept them poor cousins indeed to their more-expensive relatives.

For those without the budget or the print volume needed to justify the expense of laser devices geared to the Mac, desktop publishing remained a luxury. As 300-dpi output became *de rigueur* for almost all business communications, I heard a lot of grumbling about the cost of Mac technology. Not a few users were driven to the MS-DOS world, sacrificing the ease of the Mac's interface and software for access to printers such as the Hewlett-Packard DeskJet, the HP LaserJet series and LaserJet work-alikes from other vendors, many of which weighed in at less than half the cost of the cheapest PostScript devices.

Some users who stayed loyal to the Mac turned to early versions of Orange Micro's Grapplers, "smart" cables with QuickDraw routines in firmware, or Insight Development Corp.'s MacPrint software drivers for HP printers. Although these products enabled Mac owners to use non-Mac printers, they relied on the technique of reducing bit maps to achieve the desired resolution. For each size of each font you wished to use at 300 dpi, you had to stuff your system with bit maps of both the correct size for the display and a 400 percent multiple for the printer. What a pain!

I'm pleased to report that times have changed. For the past couple of months I've been experimenting with low-cost desktop publishing. My setup has included Adobe Type Manager, the HP DeskJet Plus inkjet printer, and either the MacPrint DeskJet driver or Orange Micro's Grappler LX cable. Frankly, I've been amazed at the results. With street prices for the basic configuration totaling less than $900, I'm getting top-quality 300-dpi output without much loss of flexibility.

These are all superior items, but the Adobe product is the magic bullet. Because ATM uses compact PostScript outline files to generate data for the printer, it gives me the ability to produce nifty layouts with lots of typefaces at odd point sizes; without it, I'd be back to playing games with bit maps. So I'm very happy. While I have not tested every possible combination of software, hardware and layout tactics, I've proved to myself that this collection of tools is more than adequate for the bulk of my day-to-day printouts. And even though the inkjet is more expensive to run than a laser printer on a page-by-page basis, it will be a long time before I burn through enough ink cartridges to equal the cost differential between the DeskJet and any laser printer.

There are, of course, some drawbacks. I've lost the use of PostScript drawing programs like Adobe Illustrator and Aldus FreeHand, I'm scratching my head over the mathematics of reconciling 72- or 288-dpi data with 300-dpi output, and I haven't quite figured out how to manage spooling (a necessity because imaging can be time-consuming). And I'm not sure I'd recommend this strategy to anyone in a heavy graphics-production environment, even for rough proofs. But then, those folks should all have PostScript capacity, shouldn't they?

What it boils down to is that designers on a shoestring need no longer butcher their layouts to match restricted output possibilities. The suffering is over; we now have alternatives. The DeskJet Plus is perfect for me, since I also own a bunch of non-Mac computers that can print to it. For those with only Mac equipment, the HP DeskWriter obviates the need for special drivers and adds a bit of speed. If you up the stakes by $500 to $1,000, you can buy a LaserJet variant and a driver, or choose a QuickDraw printer. Naturally, you've got to do your homework; certain configurations demand so much processing from the CPU that printing can take an eternity.

But whatever your specific needs, it's gratifying to have a solid middle ground between PostScript laser printers and dot-matrix printers. At last. □

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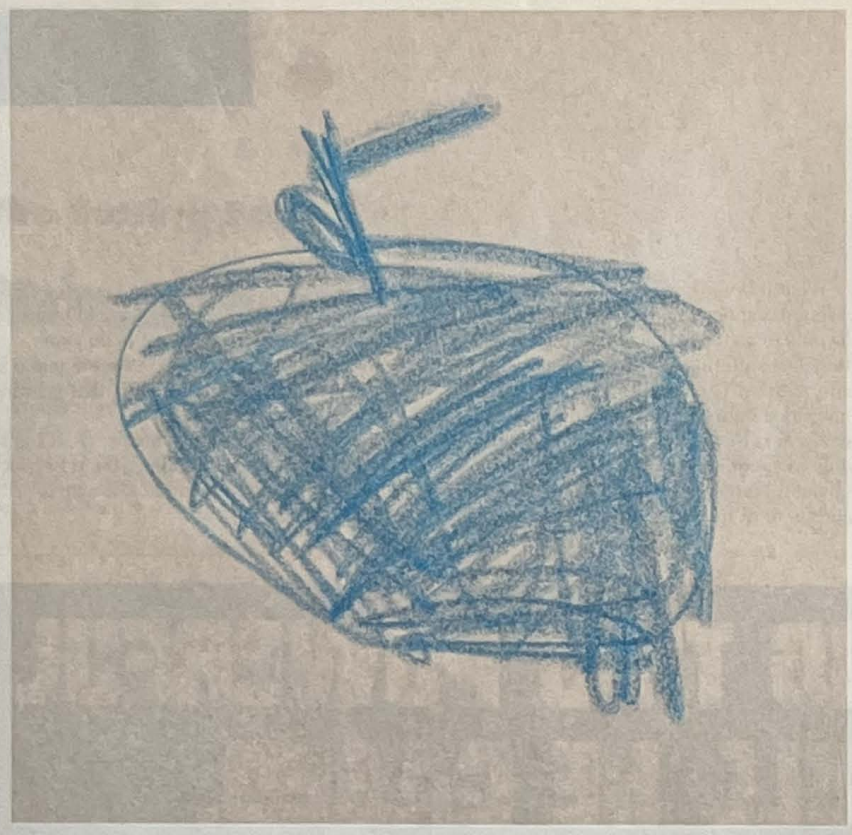

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Weekly newsletter has the fax on Mac pre-press; miniWRITER update

Reviews
Label printers from Seiko and CoStar; In brief: The Art Importer 2.0 and MacWrite II 1.1

COMPARISONS

Magneto-optics reach critical mass

Large capacity is biggest draw

By Ric Ford

We looked at two of the first erasable, magneto-optical drives for the Mac in the July 11, 1989, issue. This time we compare later versions of those same products, MACsetra Technologies International Inc.'s Genesis 6000 and Relax Technology's Optical 600 Plus, with seven other units: LaCie Ltd.'s Cirrus Magneto-Optical 600 (CMO600 for short), FWB Inc.'s HammerDisk600, Peripheral Land Inc.'s Infinity Optical, Summus Computer Systems' LightDisk, Microtech International Inc.'s OR650, Pinnacle Micro Inc.'s REO-650 and Sumo Systems' RSSM600. (Several additional vendors have announced drives but were unable to supply units in time for this review.)

These drives are well-suited to holding masses of information in standard Finder format, making them ideal for tasks such as working with large digitized images.

The speed of the current generation of erasable optical devices falls midway between that of floppy drives and Winchester hard disks. They are generally too slow for things like real-time audio or databases, but plenty fast for efficient archiving and backup.

The convenience of removable Finder-format volumes and the reliability of the medium are big advantages for magneto-optical drives, but tape drives cost less than half as much for similar storage capabilities. Winchester hard disks are still the best choice for applications that require superb performance, millions of write cycles or the highest mean-time-between-failure ratings.

Mechanisms, cartridges. Of the nine products we reviewed, four are based on Ricoh's RO-5030E mechanism, and the other five use Sony's SMO-C501. The Sony-based drives performed better than the Ricoh units (see table, below). (A future Ricoh drive is expected to be faster.) The only advantage we saw to the current Ricoh mechanism was that it operated on average somewhat more quietly.

On the outside, there is little difference between the two types of drives. The Sony-based products have a special hole in the front that allows a tool to be inserted to eject a cartridge when normal procedures fail. All drives except the Genesis 6000 have an eject button on the front.

There are two optical cartridge standards, and they are both theoretically usable with either mechanism. One cartridge has a sector size of 1,024 bytes, while the other uses the 512-byte size that is standard for hard disks and floppies. The cartridges look identical on the outside (except for a label), but the large-sector cartridges hold about 312 Mbytes per side, and the standard-sector cartridges hold 285 Mbytes per side.

Only two vendors, Microtech of East Haven, Conn., and Pinnacle Micro of Irvine, Calif., (both vendors of Sony-based products) supplied large-sector cartridges. Pinnacle also supports the small-sector cartridges.

We successfully exchanged cartridges among Sony-based drives, reading and writing data on a different vendor's drive from the one originally used to prepare the cartridge. (This is most easily accomplished by restarting the Macintosh with the selected cartridge in the available drive.)

We also could exchange cartridges among the Ricoh drives, but we were unable to read Ricoh-formatted cartridges in a Sony drive or read Sony-formatted cartridges in a Ricoh drive.

Performance. The best performance we measured for an erasable optical drive was still less than half the speed of a standard Apple internal 80-Mbyte hard disk.

We tested performance by measuring file duplication times in the Finder. The procedure tests read, write and access speed in one operation. We obtained similar results by duplicating either 10-Mbyte files or 766-Kbyte files. We also ran Steve Brecher's DiskTimer II program to separate read performance from write performance.

The Sony-based drives were about 50 percent faster than the Ricoh products overall. DiskTimer II showed the Mac writing data twice as quickly to the Sony drives and reading data from them about 20 percent faster than the Ricoh drives.

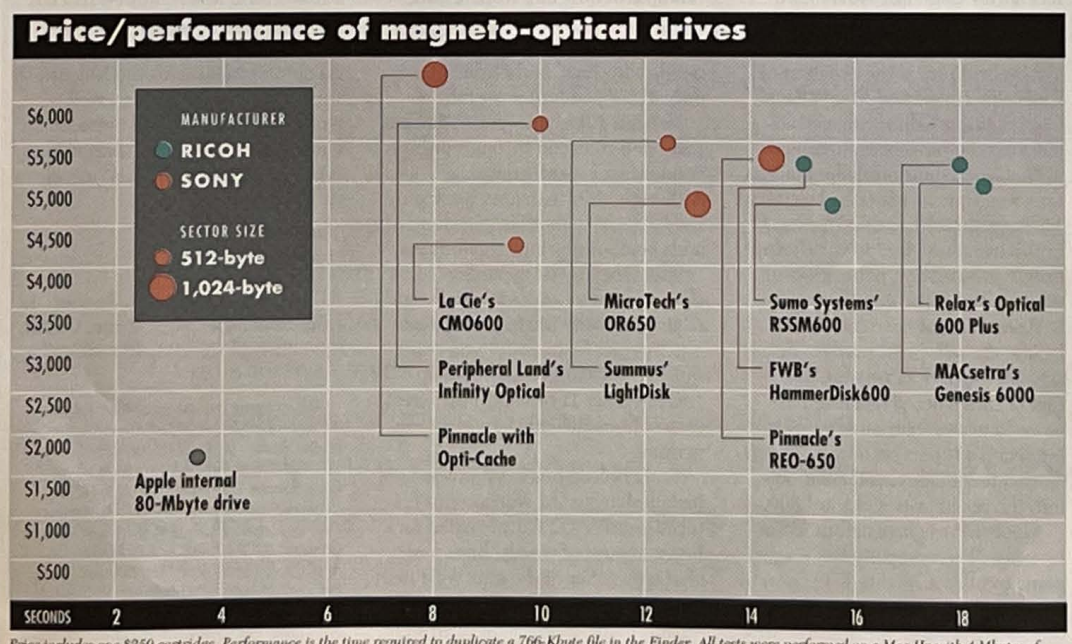
The highest level of performance was obtained on the Pinnacle REO-650, using Pinnacle's optional Opti-Cache accelerator card. Opti-Cache is a NuBus card manufactured by Golden Triangle Computers of San Diego that bypasses the Mac's standard SCSI hardware and software.

The Opti-Cache card boosted the REO-650's speed by about 25 percent in its default configuration. A Control Panel device provides a way to configure Opti-Cache, and even higher performance may be possible if the card is tuned for a specific application.

The REO-650 performed better with large-sector cartridges. In

See Comparison, next page

Price/performance of magneto-optical drives



Price includes one $250 cartridge. Performance is the time required to duplicate a 766-Kbyte file in the Finder. All tests were performed on a Mac IIx with 4 Mbytes of RAM, Ram cache off, with System 6.0.2 and 6.0.4. Results were averaged across several trials.

TRENDS

Optical drives: Truck-size storage with speed to match

By Clay Andres

Erasable magneto-optical drives, the latest advance in personal computer storage technology, combine the great storage density of optical drives with magnetic recording capability and removable media, to bring flexible and large storage capacity to the desktop.

Until recently, the most familiar optical drives in the Mac market were CD-ROM drives, which can only read the disc, and WORM (write-once-read-many) drives, which cannot be erased.

But while rewriteable optical drives for the Mac are certainly the latest in high-capacity storage, they are not breaking any speed records, and that limits their usefulness.

Optical advantages. For all the fanfare Apple and Microsoft have given CD-ROM, magneto-optical drives haven't received much attention. "Many people in the market are not even aware of rewriteable optical," said Bob Mueller, vice president and general manager of Sony Corp. of America's rewriteable optical division in Park Ridge, N.J. "People are astonished to see that rewriteable optical is real. This is an under-marketed technology."

Optical storage has several advantages, but the biggest one is density — more bits in less space. Standard 5.25-inch cartridges hold from 285 Mbytes to 312 Mbytes per side.

Optical drives also boast superior reliability. Reading with a laser causes minimal wear and, unlike hard disks, optical drives are not subject to head crashes.

Winchester-type disks float the read/write head very near the media to maximize performance. Jostling the drive can cause the head to scrape the surface of the spinning platter, obliterating information recorded there. Lasers don't need to be as close to the surface, so the heads never crash into the platter, assuring greater data integrity.

This, combined with magneto-optical's removable format and long media life, estimated at 10 years, makes optical discs attractive for archival purposes. Sony claims a lifespan of 15 years for its discs, and new glass-substrate discs may have an archival life of 25 years.

Drive speed. Magneto-optical drives are more like floppies in that they use removable media, but they are perceived as being more like fixed disk drives because they have such large capacities. However, a typical hard disk boasts an average access time of about 20 milliseconds, while today's magneto-optical devices take 60 to

See Trends, Page 40

Comparison *From previous page*

tests with standard-sector cartridges, the drive lagged behind other Sony units but still performed better than any of the Ricoh-based products.

Tigard, Ore.-based LaCie's CMO600 performed better than the other Sonys, but only marginally.

Among Ricoh drives, San Francisco-based FWB's HammerDisk600 and the RSSM600 from Sumo Systems of San Jose, Calif., performed about 20 percent better than their competitors.

Representatives from Saskatoon, Saskatchewan-based MACsetra claimed that the Canadian company's Genesis 6000 should perform better than other products because of a proprietary caching technique in the software, but we were unable to confirm this in any of our test configurations.

Software features. Erasable optical drive vendors must provide two essential pieces of Mac software with their products: an installer program and a Startup document (INIT). The installer program prepares cartridges, while the INIT loads a "driver" into memory at start-up time to handle cartridges that are subsequently inserted. (If a prepared cartridge is in the drive at start-up time, the driver is loaded directly from the cartridge, and the INIT is not necessary.)

Partitioning capabilities are an important consideration in evaluating these installers because of the huge size of optical cartridge volumes. To date, Apple has not solved the problem of the Finder crashing when too many applications are in one disk volume (see MacInTouch, Nov. 8, 1988), although System 7.0 may address the issue by incorporating special desktop management software.

The most flexible installer was LaCie's SilverLining 5.18. This application is the same one used for LaCie's hard disks, and it offers multiple, resizable partitions in Mac and other formats. Special functions provide for fine-tuning the driver software, password-protecting data, defragmenting volumes and testing cartridges. LaCie also bundles DS Backup and Silver-Server networking software in the package.

Houston-based Summus and Microtech supply software written by installer specialists Software Architects of Everett, Wash. These applications have a user interface that is somewhat simpler than LaCie's SilverLining, and they also offer multiple Mac partitions. Microtech also bundles MacTree Plus and DS Backup.

FWB handles partitioning through its Hard Disk Partition software, a more limited approach that creates "soft" partitions, actually invisible files limited in size to 32 Mbytes. The company also includes HD Deadbolt, an effective file- and folder-encryption utility, and Disk Util 2.2, a program for backing up some copy-protected applications.

FWB and most other companies, except MACsetra, Relax and Sumo, provide the installer essentials: format, non-destructive driver update and non-destructive test. The better software also lets you select an interleave ratio for different Mac models.

Peripheral Land of Fremont, Calif., bundles an extra set of utilities with its drive: TurboBack, TurboCache, TurboSpool and TurboOptimizer. We got no improvement in our tests from TurboCache, but it is a more flexible alternative to Apple's Control Panel cache that should help real-world performance.

A/UX is fully supported only by Pinnacle, which offers a $99 A/UX driver and a supplemental manual on its use. We did not test this configuration.

Hardware features. Physically, these products fall into two categories: the zero-footprint style that fits best under a Mac SE or Mac Plus and the shoe-box style that takes up about a square foot of desk space. Peripheral Land provides a special pedestal that makes it possible to position its drive vertically.

We found the Ricoh drives quieter on average than the Sonys, although Peripheral Land's Infinity Optical and the Summus LightDisk were also well-mannered. FWB's HammerDisk600 was especially silent, while Microtech and LaCie's drives were noisy enough to be mildly distracting.

The Microtech, LaCie and Sumo erasable opticals feature internal SCSI termination that can be switched on or off — a handy feature we had not seen before. Relax of Union City, Calif., and Pinnacle provide external terminators with their drives, an equally good approach. The LightDisk, HammerDisk600, Genesis 6000 and Infinity Optical use fixed internal termination, which can cause problems if you need to connect the drives to a Macintosh with an internal drive and another terminated device.

SCSI addresses can be set easily on all drives except the LightDisk and Genesis 6000, which use fixed, internally determined addresses — a weak point. Some of the drives we received were set to a default address of zero, which conflicts

See Comparison, Page 42

The little things

Drive	Cables included	Cartridge included	Termination	SCSI Address
MacSetra's Genesis 6000	None	No	Internal	Internal
LaCie's CMO600	SCSI System	No	Switchable	DIP switch
FWB's HammerDisk600	SCSI System	No	Internal	Folding pushbutton
Pinnacle's REO-650	SCSI System	No	External	DIP switch
Sumo Systems' RSSM600	SCSI System	No	Switchable	Pushbutton
Peripheral Land's Infinity Optical	SCSI System	Yes	Internal	Rotary selector
Summus' LightDisk	SCSI System	Yes	Internal	Internal
Relax' Optical 600 Plus	SCSI System	Yes	External	Pushbutton
MicroTech's OR650	SCSI System, SCSI-to-SCSI	Yes	Switchable	DIP switch

In summary: Optical drives

In this group of nine erasable, magneto-optical drives, the five products based on Sony mechanisms are clearly preferable to the Ricoh-based units. We re-evaluated the Ricoh-based MACsetra Genesis 6000 and Relax Optical 600 Plus, originally reviewed in the July 11, 1989, issue of MacWEEK, and found them uncompetitive, although Relax appears to have fixed the bugs we noticed previously.

The Sony-based LaCie CMO600 and Microtech OR650 are fast, flexible drives available directly from their manufacturers with cartridges, cables and good documentation for less than $5,000.

Peripheral Land's Infinity Optical and Summus' LightDisk are quieter than the CMO600 and OR650, but they cost over $1,000 more.

Pinnacle Micro's REO-650 costs just over $5,000, but offers full support for A/UX; compatibility with both large-sector and standard-sector cartridges; adapter kits for Digital Equipment Corp., Sun Microsystems Inc., IBM and Hewlett-Packard Co. computers; and higher performance on NuBus-equipped Macs with an optional Opti-Cache SCSI-acceleration card.

The quiet HammerDisk600 led the Ricoh group in features, and we believe that its $500 premium over the Sumo RSSM600 is justified. It's the best choice if you need to buy a slower, Ricoh-based drive.

MacInTouch

RIC FORD AND RICK LEPAGE

Fax and figures for serious publishers

RESOURCES

A "down in the trenches" newsletter. While there are a number of outlets for new product information in the high end of the desktop publishing market, getting such information as tips, workarounds and updates has not been so easy. Most service bureaus and corporate publishing departments fumble about in the dark, developing their own methods and making their own rediscoveries about the mysteries of the Linotronic L300, QuarkXPress, Aldus FreeHand and the like.

A new weekly newsletter is attempting to provide hands-on information and comment to this segment of the market. The publication, MacPrePress, has been quietly building up steam since its charter issue last November, and its content and direction have been impressive.

MacPrePress is the creation of Kathleen Tinkel and MacWEEK Contributing Editor Steve Hannaford, who have been involved in the design and publishing arena for some time as users and writers. The newsletter has that "down in the trenches" feel to it, offering timely information in a well-written, tightly edited format.

Recent issues have included a look at the pre-press market; discussions of a QuarkXPress problem that occurs when a typeface has more than a certain number of kerning pairs; a report on new color separation technology; and a window into the peculiarities of the L300.

MacPrePress is distributed via fax only. (The company has no plans to offer a "printed" version of the newsletter.) Charter subscriptions are available through the first quarter of 1990 at $250 per year. For service bureaus, in-house publishing departments and graphic designers, it is a bargain.

KEVIN BERGER

PRODUCTS

miniWRITER thrives. David Dunham's miniWRITER is an example of how much shareware has to offer at its best. This tiny desk accessory handles many text editing needs with ease, and Dunham asks only $12 if you find it useful.

Version 1.6 of miniWRITER has just been released through on-line services and users groups. Although older versions work on the latest Mac models, Version 1.6 adds some important capabilities.

The DA has the capability to choose from among fonts and type styles for both viewing and printing. Special features let you print quickly with high quality on an ImageWriter II or send PostScript instructions directly to a laser printer.

Long before big word processors installed awkward word-count features, miniWRITER provided an instant count of words, lines and characters. Similarly, miniWRITER has always offered "smart quotes" — automatic conversion of straight typewriter quotes to real typographic quotes — eliminating the need to remember confusing Option-key combinations to get attractive documents.

Since miniWRITER lacks many of the formatting capabilities of a true word processor, it is best-suited to working with pure text, such as messages exchanged through on-line services.

Version 1.6 adds a Modify command that can quickly convert text between Macintosh formats and the mainframe formats used by services like CompuServe and GEnie. Modify can change line endings, convert typographic quotes to plain quotes and eliminate foreign-accent characters that do not print or display on other computers.

As with his other work (including the indispensable Acta Advantage outliner/organizer), miniWRITER demonstrates Dunham's talent for creating appropriate software technology resonant with the Macintosh spirit and ease of use. It's well worth a few minutes to write him a check and support the shareware pipeline if miniWRITER proves useful to you.

REFERENCE

PrePress Information Service, 12 Burr Road, Westport, Conn. 06880; (203) 227-2357; (203) 454-4962 (fax).

We welcome comments at MacWEEK, 4 Cambridge Center, Third Floor, Cambridge, Mass. 02142; (617) 497-2600; (617) 497-2646 (fax). Electronic Mail: CompuServe: (Ric Ford) 75410,2612, (Rick LePage) 76117,1765; GEnie, America Online, Delphi, PAN: MACWEEKBOS; Connect: RICKLEPAGE, RICFORD; AppleLink: (address to "MacInTouch" in Subject): MACWEEK, Internet: MACWEEKBOSTON@MCIMAIL.COM; MCI Mail, MACWEEKBOSTON.

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The pros and cons of optical storage

Advantages:

- Good data integrity — drives not subject to head crashes
- High density — 600 to 1,000 Mbytes on a two-sided, 5.25-inch disk
- Long media life — expected archival life from 10 to 25 years
- Unlimited capacity — removable cartridge

Disadvantages:

- Compatibility — ISO standard not yet fully written and adopted
- Expensive — no cost benefits from competition and mass market
- New technology — not familiar to users
- Relatively slow — faster than a floppy, but not up to hard disk speeds

Trends

From Page 37

90 milliseconds to find information.

"For the purposes that these devices will be put to, the speed is more than adequate," said Walter Novinger, director of the Image Systems Division at Rothchild Consulting in San Francisco.

Magneto-optical drives are meant to complement, not replace, hard disks. In all likelihood you will still boot up from a faster hard disk and keep your primary applications and files that you use every day there.

This is true for the two major manufacturers of magneto-optical drives, Ricoh Corp. of San Jose, Calif., and Sony. But the newest manufacturer, Storage Dimensions of San Jose, Calif., a division of Maxtor, sees the magneto-optical world differently. "Our LaserStor Erasable drive is fast as heck," said Tom Pellicer, a member of Storage Dimensions' tech support group. "The 35-millisecond average access time is really attractive. It's the only drive that's fast enough to do real-time audio digitizing. I boot off it."

Data interchange. Storage Dimensions used a proprietary format to achieve greater speed and a 1-Gbyte total capacity, which means you will not be able to read your disc on any other drives if you use that format. However, LaserStor can read discs formatted with the International Standards Organization standard.

Sony and Ricoh support ISO, but since the ISO specifications are not completed yet, existing Ricoh-written discs cannot be read by Sony drives. Ricoh has recognized this limitation and will introduce an upgraded drive at the end of January that solves the problem.

To add to the confusion, there are two ISO standards: one for 512-byte sectors, the other for 1,024-byte sectors. The latter standard provides greater capacity and speed. Storage Dimensions uses a variable sector length for its proprietary discs and has applied to the ISO to make it an additional standard.

Since sectors are physically etched into the media, the discs are not interchangeable.

"Compatibility is nice, but most of the people we deal with may buy one or two units and the exchange of information isn't a big issue," said Ron Domes, founder of MACsetra Technologies International Inc. of Saskatoon, Saskatchewan, makers of a Ricoh-based drive.

Even if compatibility is an issue for you now, by the end of 1990 you can expect most compatibility issues to be solved.

Expensive technology. Magneto-optical drives were probably not in everyone's Christmas stocking. At $4,000 to $6,000, they are not yet commodity items.

Magneto-optical is still a relatively new technology and it hasn't had the chance to benefit from economies of scale. In 1989 Sony and Ricoh had the OEM market to themselves. But competition is increasing. Storage Dimensions is shipping, and Hitachi America Ltd. of Allendale, N.J., and Panasonic Industrial Co. of Secaucus, N.J., have announced ISO standard drives for 1990.

At the retail end, Mirror Technologies Inc. of Roseville, Minn., announced the first drive priced under $4,000, a second-generation Ricoh drive for $3,497.

Not only is the competition heating up, but magneto-optical technology continues to improve. "This year everyone has been concerned with shipping the product," said Ken Hallam, vice president of ENDL Consulting of Saratoga, Calif. "By the end of 1990 we'll start to see performance improvements."

"The next major innovation will be integrated heads, as opposed to the current state of the art using mirrors for fine positioning," Novinger said. "Eliminating the mirror will make a lighter head with faster seek times."

There also may be 3.5-inch drives by the end of 1990 — 200 Mbytes in a pocket-sized disc. Reducing the size will help cut costs and make optical technology more widespread.

"The high cost of rewriteable optical drives makes this look and act like a niche market, but there are no technical limitations that will keep it from moving into the mainstream," Mueller said. "It will become the primary storage media of choice for many users." □

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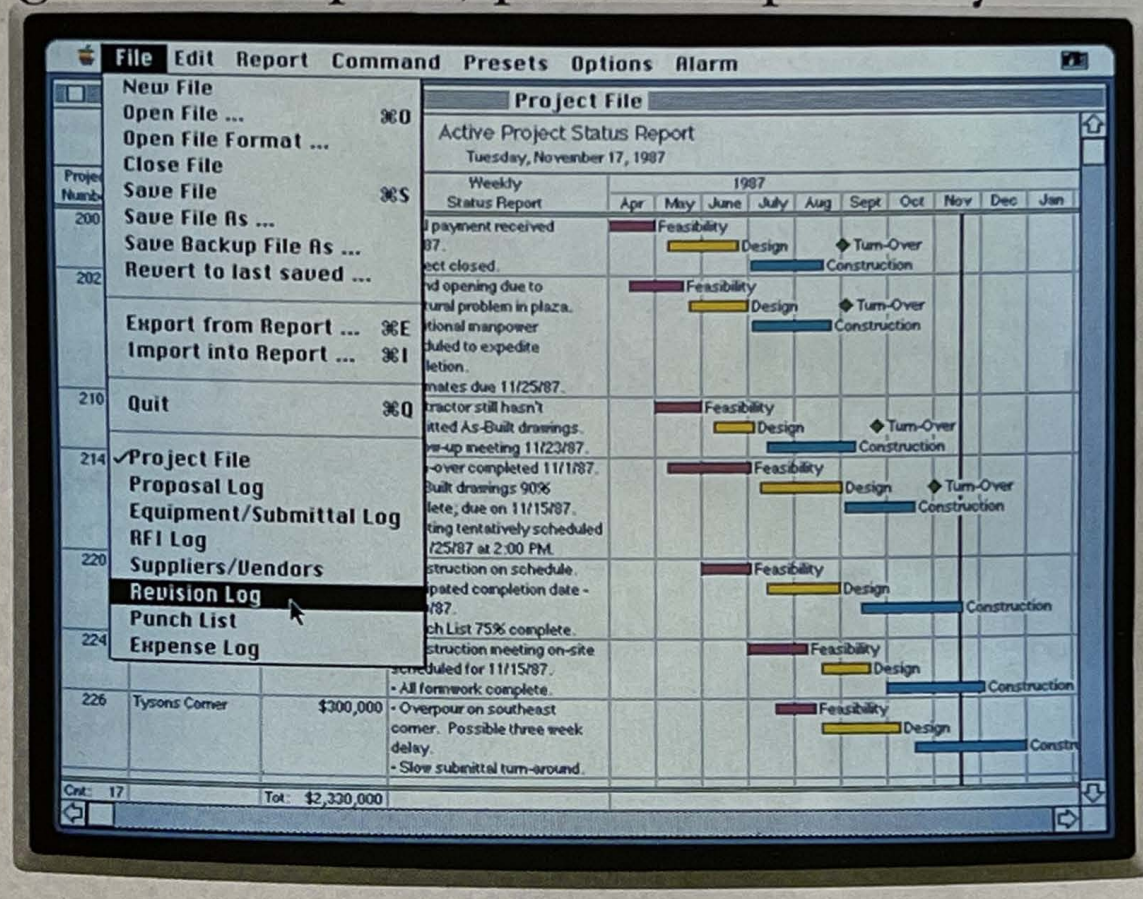

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Comparison

From Page 38

with internal Apple disks, and they had to be changed to start the computer. The LightDisk and Genesis 6000 at least avoided that problem in their choice of fixed addresses.

Customer support. Documentation quality varied greatly among these products. The Summus and Relax manuals were particularly poor, while the Microtech and Pinnacle manuals were thorough and readable. None of the companies matched the documentation standards set by companies such as Apple, GCC Technologies and Storage Dimensions.

Relax and MACsetra offer warranties of only 180 days, while all the others except Microtech provide one year of coverage. Microtech leads the way in support with a two-year warranty on the hardware, a one-year warranty on the cartridge and a toll-free support line. (Only Summus and FWB lack toll-free support numbers.)

Summus has a 30-day money-back guarantee on its drive, and it provides on-site installation, a 24-hour swap program and a warranty extension at extra cost.

Conclusions. At $4,000, LaCie's CMO600 is the general winner among the nine drives. It combines the lowest price, the best performance, the most flexible installer software, and good attention to support and hardware details. The CMO600's noise level is higher than average, but should not be a problem in most environments.

Microtech's $4,795 OR650 is competitive with the LaCie drive and very similar to it. Unlike LaCie, Microtech includes a $250 cartridge, two SCSI cables and a two-year warranty in the price. The installer software is flexible and easy to use.

Pinnacle's REO-650 costs $4,650 and requires a $450 Mac adapter kit, pushing the basic package above $5,000. For the extra money, you get special capabilities:

- Support for the $995 Opti-Cache card and its performance boost (although some compatibility problems could arise from its non-standard SCSI implementation).
- Full A/UX support.
- Adapter options for Digital Equipment Corp., Sun Microsystems Inc., IBM and Hewlett-Packard Co. computers.

The Peripheral Land Infinity Optical, at $5,699, and the $5,495 LightDisk from Summus both feature Sony mechanisms and quiet operation. The Infinity drive is more attractive and has better documentation. Summus counters with its 30-day money-back guarantee.

We see no reason to choose a Ricoh drive over the Sony products, but the $4,995 FWB HammerDisk600 was the quietest drive in the test, and it showed the results of careful work in both hardware and software. Sumo's $4,500 RSSM600 was the Ricoh runner-up, and Relax's $4,995 Optical 600 Plus was just a step ahead of the consistently disappointing hardware and software of MACsetra's Genesis 6000 (also $4,995). □

Product Info

FWB Inc.
HammerDisk600: $4,995
(415) 474-8055

LaCie Ltd.
CMO600: $4,000
(503) 684-0143; (800) 999-0143

MACsetra Technologies International Inc.
Genesis 6000: $4,995
(306) 934-6044; (800) 661-6000

Microtech International Inc.
OR650: $4,795
(203) 468-6223; (800) 626-4276

Mirror Technologies Inc.
Mirror RM600: $3,497
(612) 633-4450

Peripheral Land Inc.
Infinity Optical: $5,699
(415) 657-2211; (800) 288-8754

Pinnacle Micro Inc.
REO-650: $4,650
Mac adapter kit: $450
Opti-Cache card: $995
A/UX driver: $99
(714) 727-3300; (800) 553-7070

Relax Technology
Optical 600 Plus: $4,995
(415) 471-6112; (800) 848-1313

Storage Dimensions
LaserStor Erasable: $7,995
1-Gybte cartridge: $398
650-Mbyte cartridge: $298
(408) 879-0300

Summus Computer Systems
LightDisk: $5,495
(713) 492-6611; (800) 255-9638

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RSSM600: $4,500
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REVIEWS

Taking the jams out of label printing

Seiko, CoStar offer design simplicity

Label printers

Seiko Instruments U.S.A. Inc.
List price: Smart Label Printer, $249.95; IBM PC interface kit, $69.95

CoStar Corp.
List price: LabelWriter, $249.95

+ Excellent software with good selection of features; can print labels from a text-file list of addresses; can save frequently used addresses; low maintenance (does not use consumables such as toner and ribbon); PC interface kit available (Seiko only).

− Low resolution; one label size; limited utility for many users.

By Rick LePage

Printing labels from the Macintosh has never been an easy task. While most database programs offer some provision for printing information on odd-size forms such as labels, few other Mac applications have such a feature. In addition, the time required to set up a dot-matrix or laser printer with the proper type of labels is generally worth it only when printing large numbers of labels.

Seiko Instruments U.S.A. Inc. and CoStar Corp. have changed this situation by releasing printers that are aimed at the person who wants to print labels in small quantities. Seiko's Smart Label Printer and CoStar's LabelWriter are identical except for the names printed on the units. There are differences in the directions each company plans to take with the printer, but the basics are the same, down to the $249.95 list price.

The hardware. The printer is tiny, measuring 3.6 inches wide, 6.3 inches long and 6 inches high. It uses thermal-transfer technology to print on 1.12-by-3-inch labels at a resolution of 72 by 105 dpi. The print technology is such that there are neither ribbons to change nor toner to add, and inside the printer are few moving parts, which means that maintenance needs are minor.

Simplicity seems to have been a primary design element. There is one switch to turn the power on, a jack for the power transformer, and an RJ-11-type phone jack that is used for the cable connecting the printer to one of the Mac's serial ports.

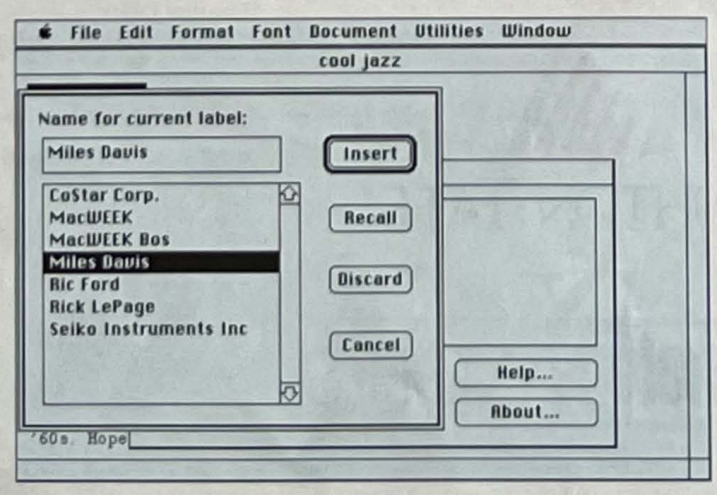
Rolls of labels are easily loaded into the printer and sit in a holder on top of the unit. A serrated edge is recessed within the printer, allowing a label to be easily torn off after it has been printed. Each roll holds 130 labels, and we didn't have any jams or problems with printing.

The only drawback we found with the printer's hardware was that you must purchase special labels through either the company or a dealer that sells the unit. The labels are priced at $12.95 for two rolls. While we understand the need for special types of labels, we would like to see some variation in the size of the labels offered.

The software. While the printing technology is impressive, it is the software that makes the Smart Label Printer and LabelWriter as useful as they are. The software, in desk accessory form, is a model of simplicity that offers a wide range of features. Like everything else about the CoStar and Seiko units, the software is the same for each printer. Seiko refers to its DA as Smart Labels, and CoStar calls its DA the LabelWriter DA.

The main window of the DA has an area for the address being printed. You can change the font, size and style of the displayed text to any available screen font, and both CoStar and Seiko provide a range of typefaces that offer good output resolution. You can set any type characteristics as defaults, so you don't have to change them each time you open the DA. A bar-code font is included with the software, allowing codes for videotapes or books or other items to be created.

Other software options include the darkness setting of normal text and bar-code formats, the number of times each label is to be printed, margins, and text alignment. All these settings can be changed for individual labels or saved as defaults.



This screen shows the interface for saving frequently used addresses in the Smart Labels or LabelWriter DA. Addresses can be inserted and recalled with the click of a button.

Label printing. The software also can automatically paste the contents of the Clipboard into the print window whenever the DA is opened. This feature makes printing out a single label quick and painless, and is indispensable for printing a label while working on a letter within a word processor.

Many users will have addresses or other data that they use on a monthly or weekly basis, and the software can store frequently used label data and recall it easily. This database-style feature even retains the type and other formatting characteristics for individual labels.

The third way that labels can be printed is via a text-only mail-list file, similar to a mail-merge document. This method allows groups of labels to be printed in a batch mode. What impressed us about this feature was that you have control over the appearance of each label in a list, by adding codes before each address or piece of data.

For example, one address could be printed in 18-point Chicago, while the next address could be in

See Label printers, Page 46

Reviews in Brief: THE ART IMPORTER 2.0 • MACWRITE II 1.1

The Art Importer 2.0

When Altsys Corp. first released KeyMaster (now renamed The Art Importer), we liked the quick, easy way it let you build downloadable laser fonts and corresponding screen fonts by importing EPS (Encapsulated PostScript) or PICT artwork (see MacWEEK, March 21, 1989).

However, KeyMaster restricted you to no more than 16 characters per font, limiting its usefulness. The Art Importer 2.0 now allows a full complement of up to 256 characters in each font, depending on the complexity of the artwork and the amount of memory in your printer.

The new product also adds support for images imported from Adobe Streamline and Broderbund Software's TypeStyle, and has added capabilities for retaining color information in the artwork. But, like KeyMaster, The Art Importer still cannot handle any kind of bit-mapped or TIFF artwork, and requires every EPS and PICT image to be in a separate file.

Altsys offers a special version of The Art Importer 2.0 for Macs equipped with a math coprocessor. We found the importing of artwork noticeably faster using this version because The Art Importer's image conversion makes intensive use of floating-point math calculations.

Unfortunately, Altsys doesn't include this special Mac II version of The Art Importer in the package when you buy it. Rather, you must send in your registration card and an additional $10 to receive it.

The Art Importer 2.0 retails for $179, but registered purchasers of KeyMaster can upgrade for $20. Altsys Corp. is located at 720 Avenue F, Suite 109, Plano, Texas 75074; (214) 424-4888. — *By Dennis Klatzkin*

MacWrite II 1.1

It would be hard to consider it a major upgrade, but Version 1.1 of Claris Corp.'s MacWrite II contains enough new features to build upon the success of the original version (see MacWEEK, April 18, 1989).

The biggest enhancement is the addition of Claris' XTND technology, which the company hopes will become a Mac standard for file translation and document interchange. To the user, this means a richer set of options for importing and exporting documents from within MacWrite II.

This feature not only works with files created by a number of Mac applications, such as Microsoft Corp.'s Word 4.0, Symmetry Corp.'s Acta Advantage and T/Maker Corp.'s WriteNow 2.0, but with many file formats found on other computers as well, such as Claris' AppleWorks for the Apple II or Microsoft Word and WordPerfect Corp.'s WordPerfect for the IBM PC.

Most users will be satisfied with these translation formats, but those with greater needs can turn to DataViz Inc.'s MacLinkPlus/Translators. MacLinkPlus works transparently with MacWrite II, which adds translation for non-Macintosh word processors such as MicroPro International Corp.'s WordStar, Ashton-Tate Inc.'s Multimate, XyQuest Inc.'s XyWrite III and Digital Equipment Corp.'s WPS-Plus VMS, among others.

Other additions and changes to the program include:

- Support for fractional width spacing, which is necessary for MacWrite II's proper operation with Adobe Systems Inc.'s Adobe Type Manager.
- All of MacWrite II's supplemental files, such as the dictionary, thesaurus and translator files, can be placed in a separate folder within the System folder and still be invoked automatically, reducing clutter.
- The MacWrite II help system, based upon Symmetry's HyperEngine, has been improved and now includes an index for quickly referencing topics.

MacWrite II was a strong program when we first reviewed it, and it remains so. We would have liked to see the addition of multiple headers and footers in a document and a bit of a speed boost when dealing with large (more than 200-Kbyte) documents, but those types of features can wait for more-substantial upgrades.

The update is available free upon request from Claris Corp. Customer Relations, MS C-11, 5201 Patrick Henry Drive, Box 58168, Santa Clara, Calif. 95052; (408) 727-8227. — *By Rick LePage*

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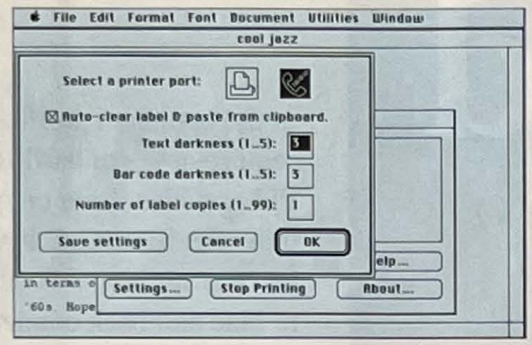
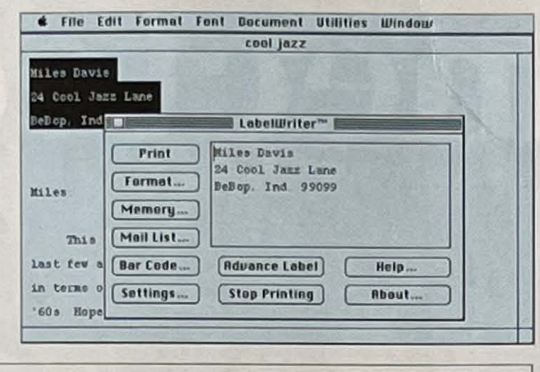
MWK AD-28

The auto-clear option in the LabelWriter and Smart Label Printer preferences screen (near right) automatically inserts the contents of the Clipboard into the main screen of the DA.

The main screen of the LabelWriter software (far right) shows the print window and the various formatting and printing options.





Label printers

From Page 44

12-point Courier bold with the text centered, and the latter could be printed twice. Every option offered through the DA's window can be accessed by a code in a mail list.

Similarities and differences. While the Smart Label Printer and LabelWriter are the same unit and use the same software, there are some differences in marketing. Seiko has an advantage over CoStar in that it offers the same product to the IBM PC market. For $69.95, Seiko sells a PC-interface kit that includes a PC cable, software and a manual. Given the compactness of the Smart Label Printer, moving it around is no problem, and Seiko might find success in mixed environments.

These printers are not designed for heavy-duty use. If you need to do constant mass mailings of labels from a database application, these are not products that will fill the bill. For users with more-sporadic needs, however, both are good solutions.

While Seiko is targeting both the Mac and IBM sides of the fence, CoStar is attempting to add more value to the LabelWriter by developing additional software for it. First on the agenda is a Chooser-level printer driver for the LabelWriter, which will allow the unit to be used as a normal Macintosh printer, with the ability to print graphics.

CoStar also is working on a Startup document (INIT) called AutoLabel, which reportedly will extract addresses from a letter while it is being sent to the Mac's main printer, and print a label on the LabelWriter.

Unfortunately, neither of these additions have been released yet, although CoStar promises both soon. If each works as advertised, CoStar will be able to offer better functionality to the Mac user.

Conclusions. Both the Smart Label Printer and the LabelWriter are first-rate units with excellent software that has a wide range of well-chosen features. The low resolution of the printer output can be a limitation, but a bit of experimentation with fonts can achieve satisfactory results.

Since the label printers take up one of the Mac's precious serial ports, you will need to juggle cables or purchase an A-B switch box if you want to hook up a standard Mac printer and other serial peripherals, such as a modem. For office installations, the printers can be used with Cambridge, Mass.-based Shiva Corp.'s NetSerial over an AppleTalk network. We tested this configuration, and it works well.

These printers are not designed for heavy-duty use by any means. If you need to do constant mass mailings of labels from a database application, these are not products that will fill the bill. For users with more-sporadic needs, however, both the Smart Label Printer and LabelWriter are good solutions.

Seiko Instruments U.S.A. Inc. is located at 1144 Ringwood Court, San Jose, Calif. 95131; (408) 922-5900. CoStar Corp. is at 22 Bridge St., Greenwich, Conn. 06830; (203) 661-9700; (800) 426-7867. □

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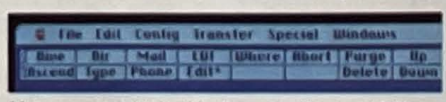
Multi-windows, actually.

With PacerLink connectivity software, Mac users can manage multiple VAX jobs by viewing multiple concurrent terminal emulation sessions. Enter data in one window and your VAX host updates all others continuously, even under MultiFinder.

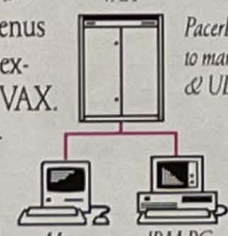
Using Mac techniques, you can adjust PacerLink windows as you please. Enlarge, miniaturize, stack or just stick them in a convenient corner to keep an eye on!

To make the VT100 and VT220 terminal emulator even more useful, we've built in programmable "softkeys" that allow complicated interactions to be executed with a single click. Along with the pull-down menus and windows, these softkeys extend the Mac interface to the VAX.



User-programmable "softkey" macros allow long VAX command streams to be executed with a single click.

Equally important, PacerLink integrates its terminal emulation with file transfer, virtual disk and print services to give you full functionality with one product. It connects IBM PCs (and compatibles) as well as Macs to VAX (VMS and ULTRIX) and several UNIX systems.*



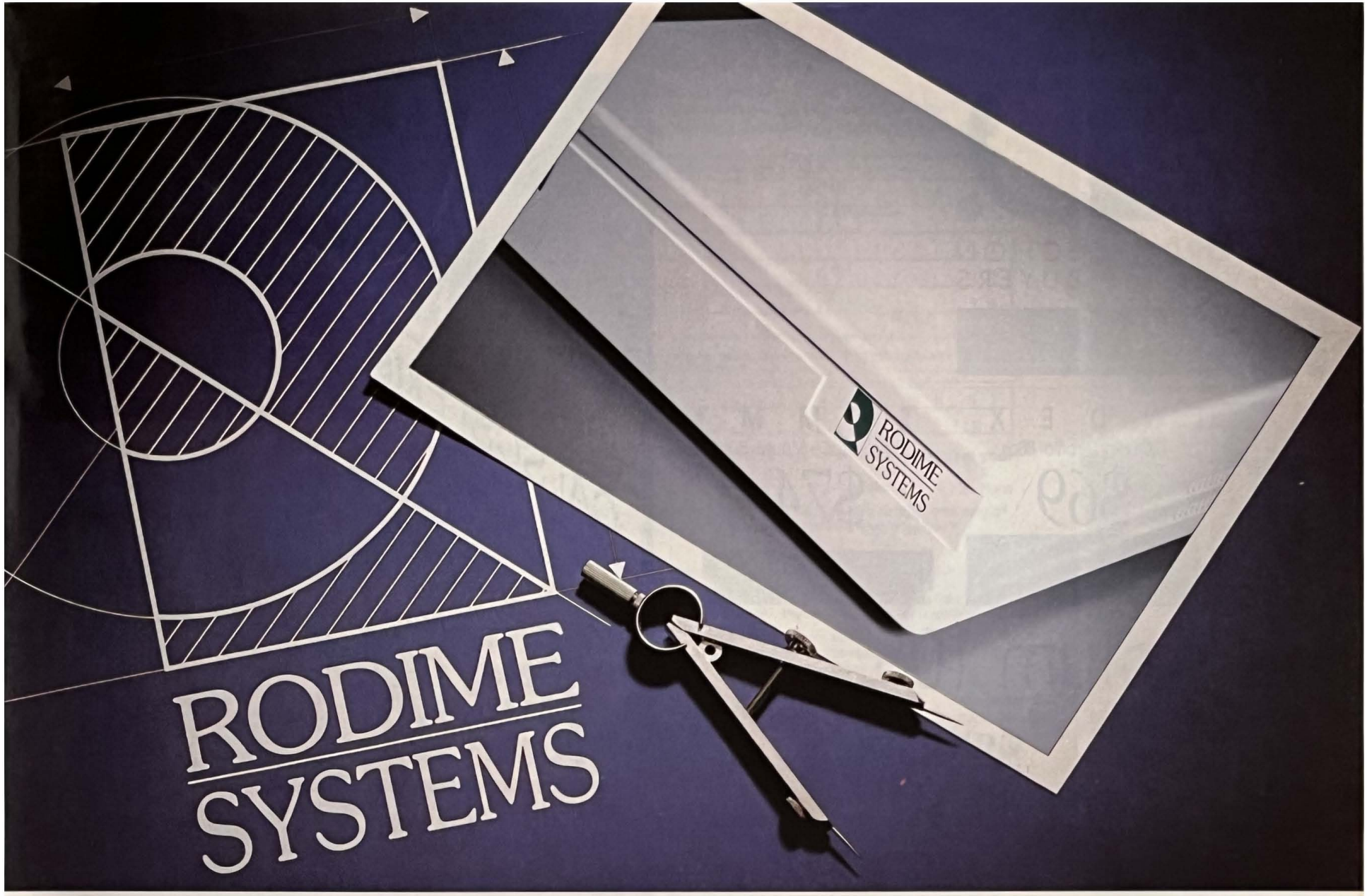
PacerLink connects Macs and IBM PCs to many hosts, including DEC VAX (VMS & ULTRIX) and several UNIX systems.

PacerLink is the core of a powerful family of integrated micro to mini solutions. Add PacerShare, and you gain a VAX/VMS AppleShare-compatible file server that's completely transparent. Add PacerPrint, and users on either side of the network can access PostScript printers. With PacerGraph, you extend graphic emulation capabilities to the VT240/VT241 standards.

For more information on how you can plug your Mac users into VAX power, call (508) 898-3300 or (619) 454-0565.

Pacer SOFTWARE

PACER SOFTWARE, Inc., 7911 Herschel Ave., Suite 402, La Jolla, CA 92037 (619) 454-0565; 1900 West Park Drive, Suite 280, Westborough, MA 01581 (508) 898-3300; Pacer Europe S.A., Valbonne, France, (33) 93 653 008; Maxima, Exeter, England, (44) 392 434071; NOCOM, Uppsala, Sweden (46) 18 321090. *Physical connection between the Mac/IBM PC and host can be RS-232, Ethernet (EtherTalk or TCP/IP) or Apple LocalTalk bridged to Ethernet using Kinetics FastPath or Cayman GatorBox. All product names subject to trademark claims.



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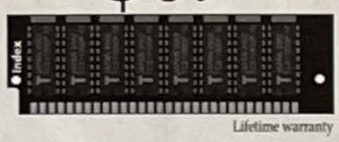

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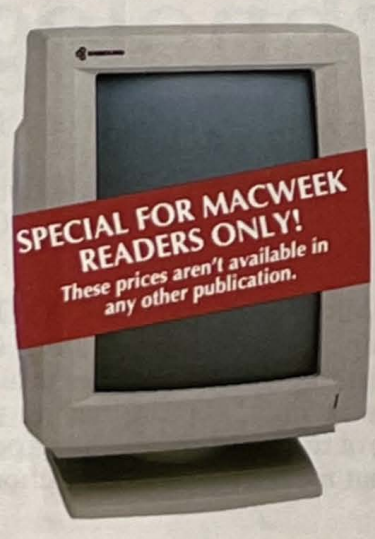

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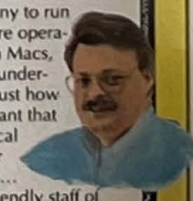

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AABA

1 Your company's primary business activity AT THIS location (check one only):

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- ☐ 03. Research and Development
- ☐ 04. Graphic Arts
- ☐ 05. Communications: Publishing, Advertising, Public Relations, Promotion
- ☐ 06. Government: Federal
- ☐ 07. Government: Non-Federal
- ☐ 08. Manufacturing
- ☐ 09. Education
- ☐ 10. Finance: Banking, Accounting, Insurance, Real Estate
- ☐ 11. Health, Medical, Legal
- ☐ 12. Retail, Wholesale, Distribution
- ☐ 13. Agriculture, Mining, Construction, Oil, Transportation, Utilities

Computer Related
- ☐ 20. VAR/VAD
- ☐ 21. Retailer/Distributor
- ☐ 22. Systems House/Data Processing Service
- ☐ 23. Manufacturer (Computers, Software, Peripherals)
- ☐ 24. Computer Consultant
- ☐ 99. Other Businesses & Services (please specify) _____

2 Your Professional Title (check one only):
- ☐ A. Chairman/President/Owner/Partner
- ☐ B. VP/Controller/Treasurer
- ☐ C. General Manager/Director
- ☐ D. Micro Manager/Specialist/Coordinator
- ☐ E. Project Manager
- ☐ F. Art Director/Graphic Designer/Artist/Illustrator
- ☐ G. Manager/Supervisor (not listed above)
- ☐ H. Architect/Engineer
- ☐ I. Systems Analyst/Programmer
- ☐ J. Consultant/Advisor
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- ☐ L. Educator
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- ☐ N. Professional (Doctor, Lawyer, etc.)
- ☐ O. Accountant
- ☐ P. Representative
- ☐ Z. Other (please specify) _____

3 Your department/function at this location (check one only):
- ☐ A. Engineering/Systems Engineering
- ☐ B. Research & Development
- ☐ C. Communications/Publishing/Public Relations
- ☐ D. Art/Creative Design
- ☐ E. MIS/DP/Information Systems
- ☐ F. Manufacturing/Operations/Production
- ☐ G. Sales/Marketing
- ☐ H. Administration/Management/Personnel
- ☐ I. Accounting/Finance
- ☐ J. Education/Training
- ☐ K. Science
- ☐ L. Consulting
- ☐ Z. Other (please specify) _____

4 Are there Macintoshes or other PCs listed below owned and/or planned for purchase within 1 year at this location?
☐ Yes ☐ No
(Write in accurate quantity for all that apply)

		Currently Owned (Quantity)	Plan to Purchase (0-12 Months) (Quantity)
Macintosh IIcx/Macintosh IIx	1		
Macintosh IIci	2		
Macintosh II	3		
Macintosh SE/30	4		
Macintosh SE	5		
Macintosh Portable	6		
Macintosh Plus	7		
Macintosh (Other)	8		
IBM/Compatible Micro	9		
Workstation (e.g. Apollo, Sun)	10		

5 If your firm's primary business at this location is retailing, reselling or consulting, how many Macintoshes are sold per year (answer one only):
- ☐ A. Retailer: sold per year _____ (specify quantity)
- ☐ B. Reseller: resold per year _____ (specify quantity)
- ☐ C. Consultant: purchased by your clients through your firm's recommendations per year _____ (specify quantity)
- ☐ D. Not Applicable

Required: Company name and company street address must be written below or applications cannot be processed. *Please print.*

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Company Name
Division | MS
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City | State | Zip

Optional: Enter home address below ONLY IF YOUR COMPANY WILL NOT ACCEPT DELIVERY. (Company information is still required.)

Post Office Box or Street Address
City | State | Zip

6 Please check the Mainframe(s) or Minicomputer(s) at your location (check all that apply):
☐ 01. VAX ☐ 02. IBM ☐ 03. Other ☐ 09. None

7 Do you purchase, recommend, specify or approve any of the Macintosh/Compatible products listed below?
☐ Yes (If yes, please check all that apply) ☐ No

Computers
- ☐ 01. Macintoshes
- ☐ 02. Workstations
- ☐ 03. Minis, Mainframes

Connectivity
- ☐ 10. Local Area Networks
- ☐ 11. Modems
- ☐ 12. Micro/Mini/Mainframe Links
- ☐ 13. Communications Software

Peripheral Equipment
- ☐ 20. Laser Printers
- ☐ 21. Color Printers
- ☐ 22. Color Monitors
- ☐ 23. Hard Disks
- ☐ 24. Backup Systems
- ☐ 25. Plotter, Charting Devices
- ☐ 26. Scanners

Add-in Boards
- ☐ 40. Memory Boards
- ☐ 41. Graphic Boards
- ☐ 42. MS DOS Boards
- ☐ 43. Ethernet Boards

Software
- ☐ 50. CAD/CAM
- ☐ 51. Graphics
- ☐ 52. Desktop Publishing
- ☐ 53. Desktop Presentation
- ☐ 54. Database
- ☐ 55. Programming
- ☐ 56. Accounting, Payroll
- ☐ 57. Spreadsheets
- ☐ 58. Music
- ☐ 59. Project Management
- ☐ 60. Word Processing
- ☐ 61. Utilities

8 If you help purchase, specify, recommend or approve Macintosh Computers, software or peripherals, for how many MACs do you have this involvement over the course of one year?
- ☐ 01. 500 +
- ☐ 02. 100-499
- ☐ 03. 50-99
- ☐ 04. 20-49
- ☐ 05. 10-19
- ☐ 06. 4-9
- ☐ 07. 1-3
- ☐ 09. None

9 Please indicate the communications capabilities that the Macintoshes at your location have (check all that apply):
- ☐ 01. Local Area Network
- ☐ 02. Communicate with corporate workstations, mini or mainframe computers
- ☐ 03. Communicate with remote mini or mainframe computers
- ☐ 04. Communicate via modem
- ☐ 05. Voice/Data
- ☐ 09. Other (please specify) _____

10 Indicate how many employees there are in your entire company (check one only):
☐ 01. 1000 or more ☐ 02. 100-999 ☐ 03. Under 100

11 Indicate an additional individual at this location who might qualify for a FREE subscription to MacWEEK:

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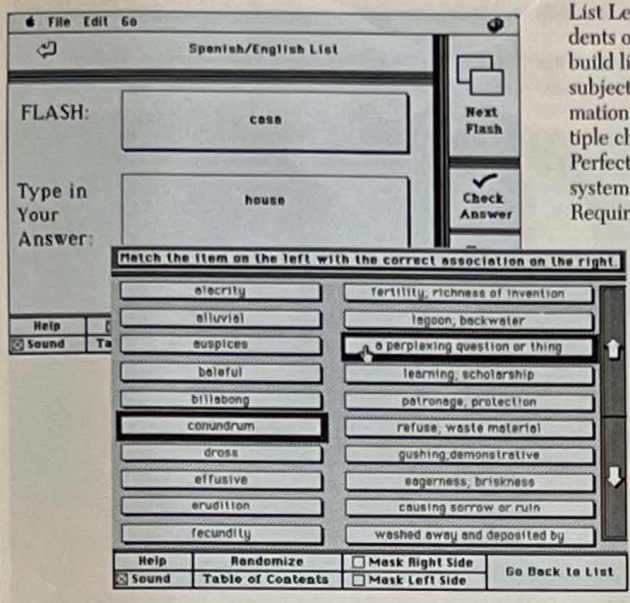

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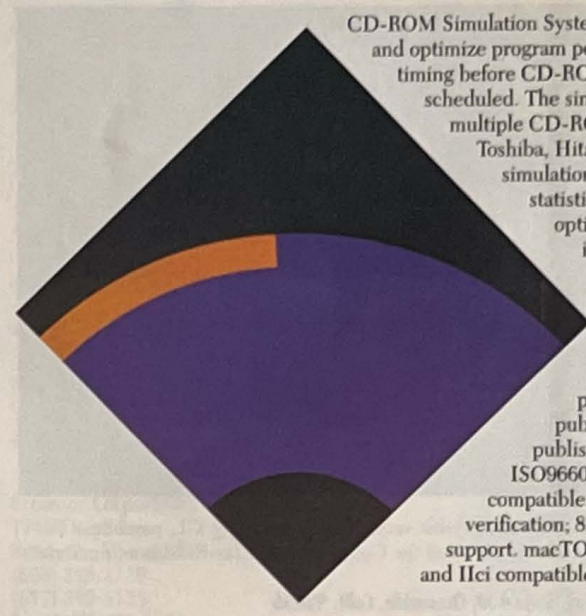

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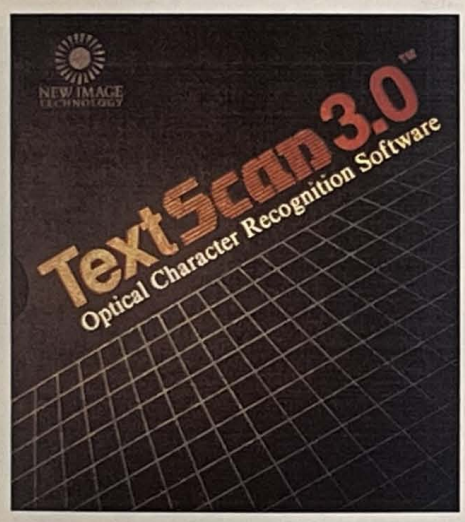

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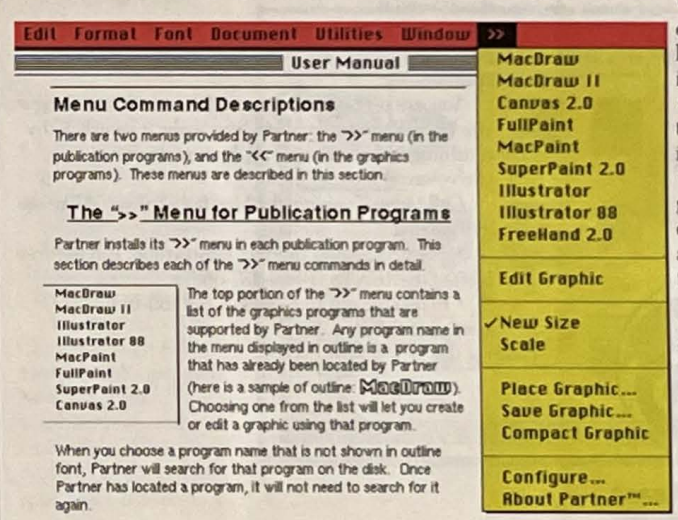
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User Manual
Menu Command Descriptions
There are two menus provided by Partner: the ">>" menu (in the publication programs), and the "<<" menu (in the graphics programs). These menus are described in this section.
The ">>" Menu for Publication Programs
Partner installs its ">>" menu in each publication program. This section describes each of the ">>" menu commands in detail.
MacDraw
MacDraw II
Illustrator
Illustrator 88
MacPaint
FullPaint
SuperPaint 2.0
Canvas 2.0
The top portion of the ">>" menu contains a list of the graphics programs that are supported by Partner. Any program name in the menu displayed in outline is a program that has already been located by Partner (here is a sample of outline: MacDraw). Choosing one from the list will let you create or edit a graphic using that program.
When you choose a program name that is not shown in outline font, Partner will search for that program on the disk. Once Partner has located a program, it will not need to search for it again.
MacDraw
MacDraw II
Canvas 2.0
FullPaint
MacPaint
SuperPaint 2.0
Illustrator
Illustrator 88
FreeHand 2.0
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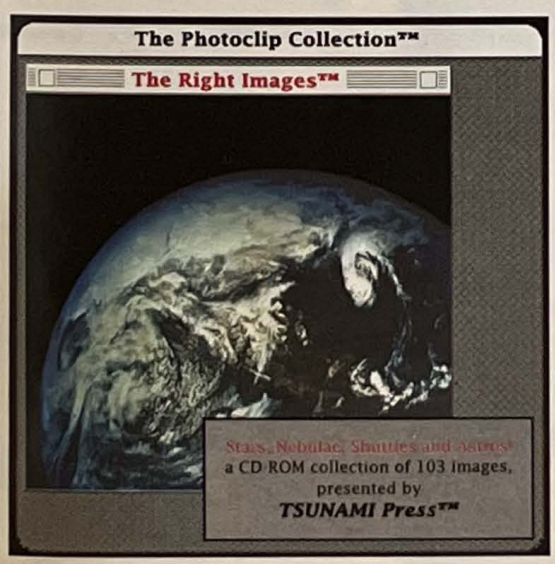

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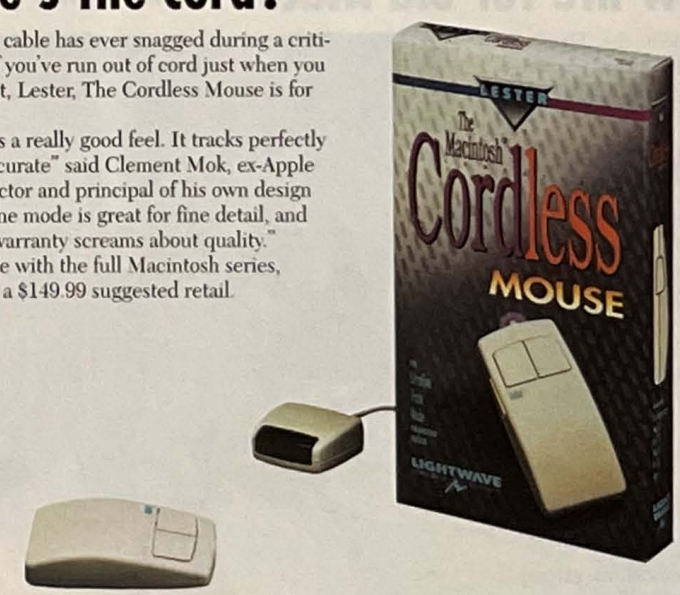

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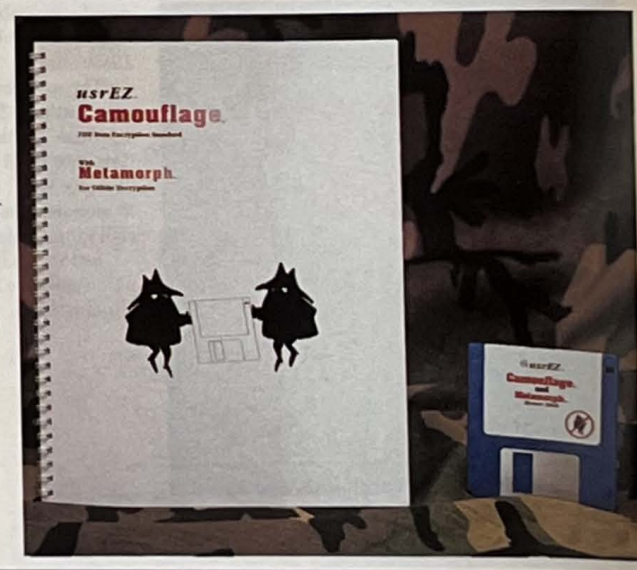

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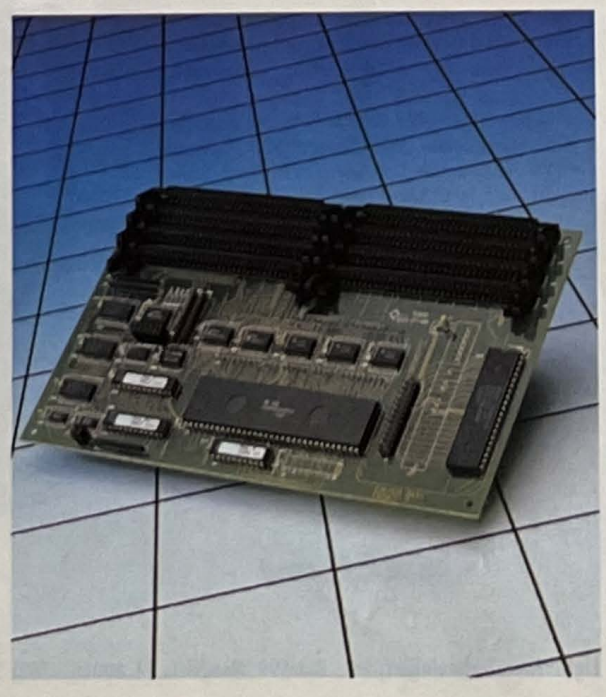

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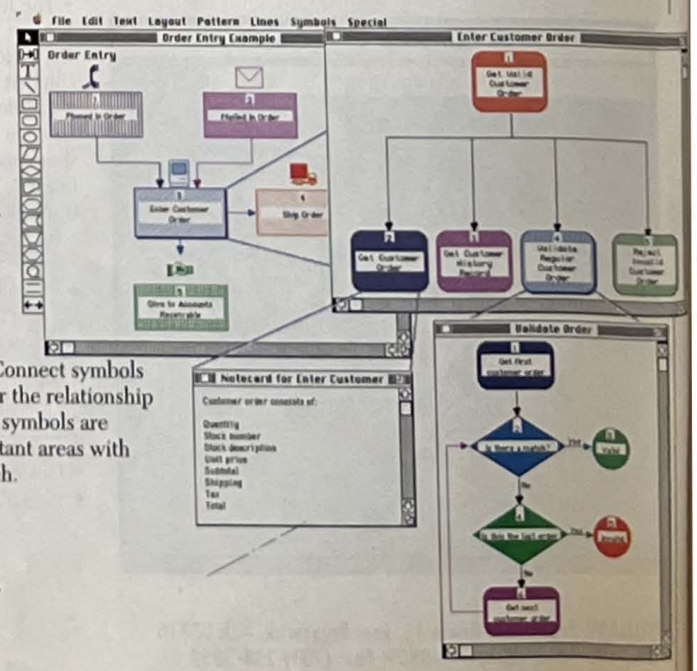

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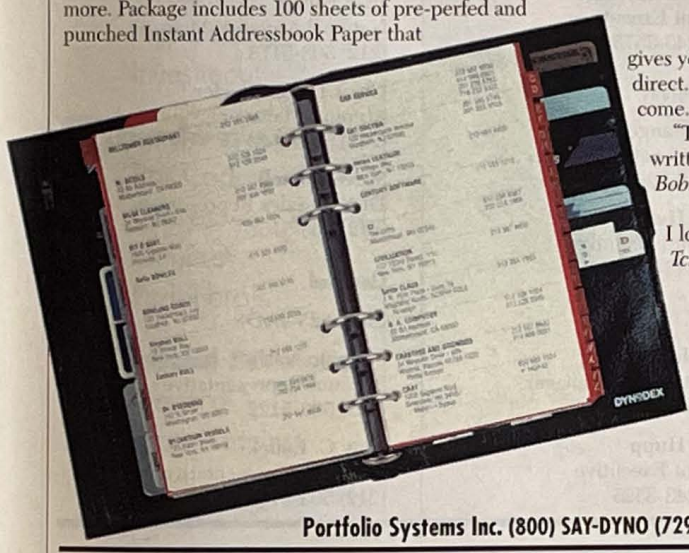

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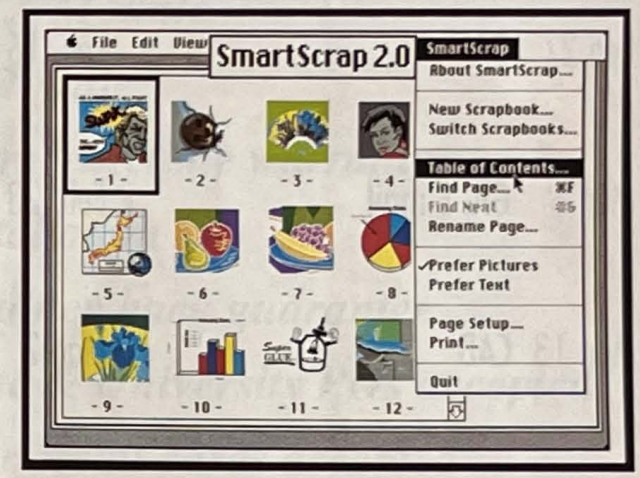

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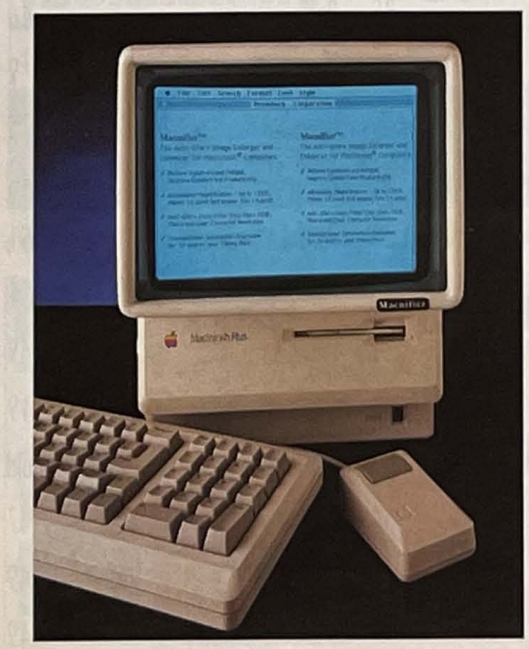

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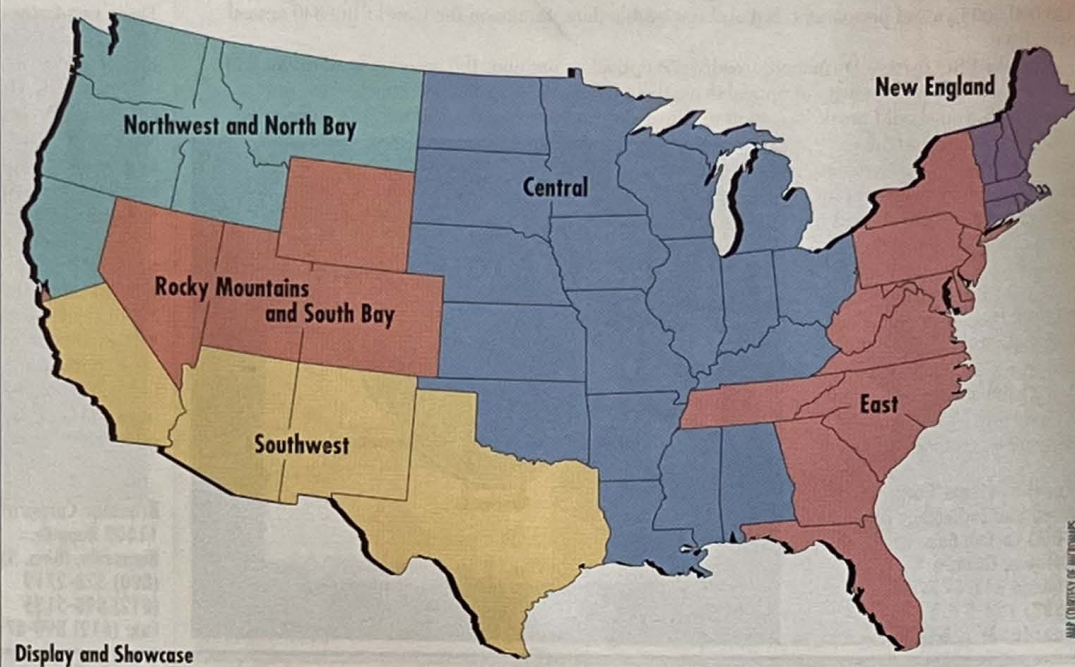

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Advertiser index

Absolute Solutions	50	First Financial Technology	50	MicroFrontier	35	Pacer Software	46	Sharp Electronics	29
AEC Management	41	GE Rental/Lease	50	MicroNet	18	Paragon Concepts	9	Shiva Corp.	66
Avatar	36	Hewlett-Packard	11, 12, 13	Microsoft	4, 5	Pinnacle Micro, Inc.	15	Sixty Eight Thousand, Inc.	51
Braemar Corp.	51	IDEAssociates	60	Microtech International	21	PLI	45	Software Spectrum	14
Broderbund Software	22	Image Systems Technology	28	Mitsubishi	30	Portfolio Systems	51	Software That Fits	48
Computer Age	48	Jasmine	2	Monotype	28	Premtech	51	Solutions Inc.	51
Corel Systems	51	Kaetron Software	50	Multi-Ad Services	24	Prism	49	SuperMac Technology	27
Deft	19	Kodak	62	New York University	8	Quantum	19	TechnologyWorks	43
DPI	40	Letraset	31	Newbridge Microsystems	50	RasterOps	gatefold	Timeworks	34
EMAC	39	LightWave Technologies	49	Nutmeg Systems	64	Rodime	47	TOPS	32, 33
Farallon Computing	65	MacTel	48	OMI	49	Salient	49	Tsunami Press	49
Fifth Generation	16, 42	Mass Microsystems	25	Oracle Corp.	7	Selective Memory	49	usrEZ Software	50

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IN THIS SECTION

53 **Memory Upgrades**
- Boards
- Disk Drives
- Simms

56 **Software**
- Business Management
- Desktop Publishing
- Education
- Financial
- General
- Graphics
- Hyperstack
- Investment

57 **Hardware**
- Bar Coding
- Cables
- General
- Peripherals

58 **Special Services**
- General
- Programming
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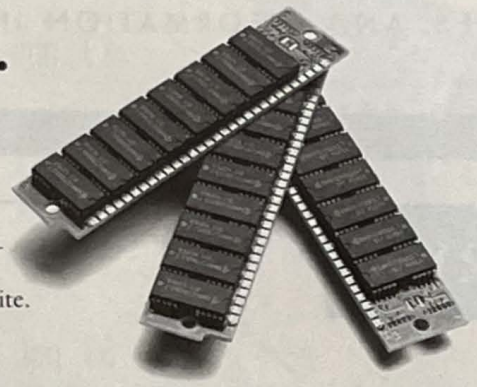

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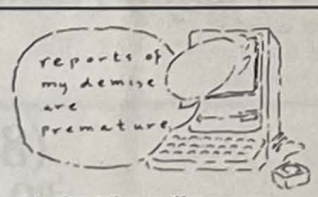

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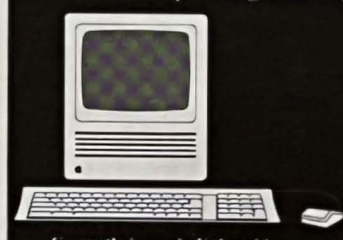

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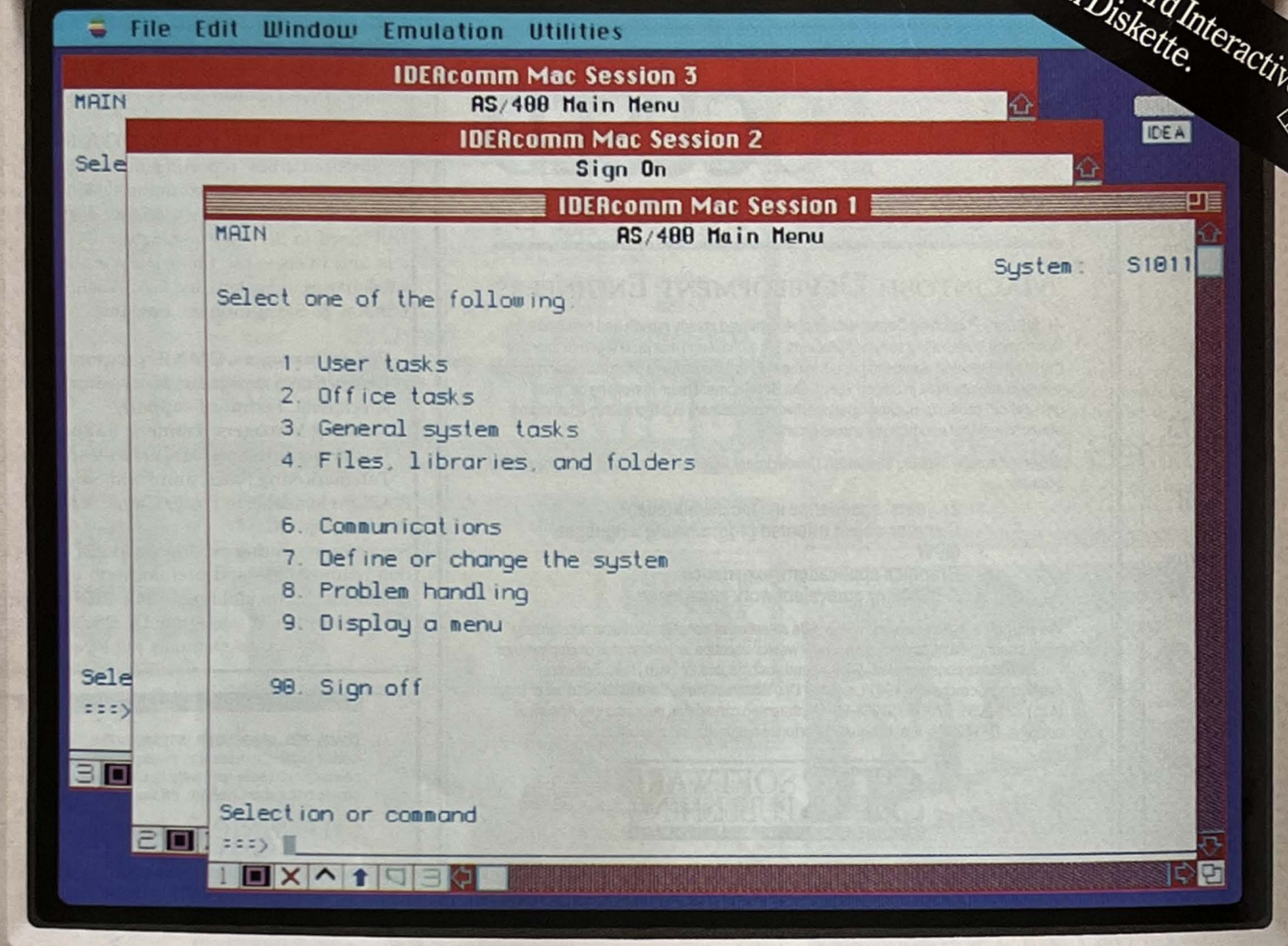

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InBox update fuels tight E-mail race

Network growth spurs market boom

KEVIN BERGER

By Carolyn Said

New Canaan, Conn. — The installed base of LAN electronic-mail packages doubled during the past year, but the Mac market is a long way from being saturated, according to experts.

"The Mac is still way below its potential," said Eric Arnum, editor of Electronic Mail & Micro Systems (EMMS), an industry newsletter based here. "There are maybe 200,000 Mac mailboxes and 3 million Macs."

Steve Wendler, program director of The Gartner Group, an industry analysis firm based in Stamford, Conn., said the E-mail market is directly linked to the size of the LAN market.

"Once people get a collection of personal computers installed, they go off and get a LAN," Wendler said. "Once they have that installed, they look around for an application to use the LAN. The first interpersonal application that is available is E-mail."

More than 70 percent of all Mac workstations are already networked, according to Apple, and the big three in Mac E-mail — InBox from the Alameda, Calif.-based TOPS subsidiary of Sun Microsystems Inc.; QuickMail from CE Software of West Des Moines, Iowa; and Microsoft Mail from Microsoft Corp. of Redmond, Wash. — and a growing field of smaller competitors have been aggressively promoting their "interpersonal applications" to this growing market.

According to estimates published by EMMS, InBox has an installed base of 9,000 servers and 55,000 users; QuickMail runs on 8,000 servers and connects 35,000 users; and Microsoft Mail is installed on 7,000 servers for 35,000 users. (While the servers are Macintosh-only, the user figure comprises IBM PCs, PC compatibles and Mac platforms, since all three packages now support PCs as clients.)

CE Software, however, disputes these figures, claiming on the basis of its sales figures that QuickMail has an installed base of 172,000 Macs and PCs. TOPS confirmed EMMS' statistics for InBox, and Microsoft estimated that there are 50,000 users for Mail.

Dayna Communications Inc. of Salt Lake City entered the E-mail fray in July with DaynaMAIL for the Mac; a PC version is due this month. And a host of IBM PC mail developers now have Macintosh implementations on the market or under development (see sidebar at left).

TOPS fired the most recent salvo in the E-mail battle this week when it announced shipment of Version 3.0 of InBox, sending a free 20-user starter set to the 600,000 TOPS network users (see story, Page 1).

"TOPS is really trying to take some market share now. They have

See E-mail, next page

Mac lures PC mail vendors

While Macintosh mail developers go after the mixed-platform network market with IBM PC versions of their products, vendors of PC LAN electronic-mail packages have been moving in the opposite direction.

"People who are serious about business networking will have to offer connectivity" between various LANs and platforms, said Richard Villars, manager of computer network strategies at International Data Corp. of Framingham, Mass.

ccMail of Palo Alto, Calif., the leading PC E-mail vendor with 270,000 mailboxes, according to a recent market study by Electronic Mail & Micro Systems (EMMS) newsletter, shipped a Mac version in July. Action Technologies Inc. of Emeryville, Calif., which EMMS said has 55,000 users for The Coordinator, in July added MacAccess: The Macintosh Link to The Coordinator.

Retix Inc. of Santa Monica, Calif., plans to ship next month a Mac version of its RetixMail, an X.400-compatible mail package.

Consumers Software of Vancouver, British Columbia, which, according to EMMS, has 130,000 Network Courier mailboxes installed, will release a Mac version next month. And WordPerfect Corp. of Orem, Utah, plans to deliver a Mac version of WordPerfect Office, its multiplatform office automation system with mail capabilities, later this year.

Two other leading E-mail packages, 3+ Mail from 3Com Corp. of Santa Clara, Calif., and Network Mail from Banyan Systems Inc. of Westboro, Mass., boast installed bases of 175,000 and 75,000, respectively, according to EMMS. No breakdown is available between Macintosh and PC clients, but industry experts said both are heavily PC-oriented. The 3Com and Banyan E-mail systems gain market leverage by being bundled with the companies' LAN packages.

— By Carolyn Said

Discovery said to have closed its doors

By Pamela Pfiffner

Annapolis, Md. — Discovery Software Inc., until recently embroiled in a dispute with Studiotronics Inc. over a color scanning system, has closed its doors, and sources close to the company said that Richard M. Ross Jr., Discovery president and founder, has filed for bankruptcy.

Ross could not be reached for comment.

Founded by Ross in 1985 as the U.S. distributor of Marauder, an Amiga disk utility that removed copy protection, Discovery gained fame with the arcade game Arkanoid, which initially was designed for the Amiga and brought to the Macintosh in 1988.

"There was a constant shift in direction at Discovery," said Bob Hires, creative director with the company until last spring and now owner of HiRES Graphics in Collingswood, N.J. "There was a time when Discovery wanted to be the Amiga game company. Then Rick (Ross) started looking at the applications market for the Mac, where companies made more money."

Ross thought he had found the right match in Studiotronics Inc., the Winter Park, Fla.-based developer of a software and acetate filter package that lets users digitize color images with black-and-white scanners. Discovery offered to purchase a controlling interest in the company to market the product, which Studiotronics called Colorset. Discovery renamed it Chroma-32, but the deal fell through in July.

See Discovery, next page

Business BRIEFS

Judge orders BrainPower to stop selling StatView

Oakland, Calif. — In the latest twist in a long-running dispute between former partners, a state court judge here this month issued a temporary restraining order barring BrainPower Inc. of Agoura Hills, Calif., from further marketing StatView and StatView 512+ statistical packages originally developed by Abacus Concepts Inc.

The ruling in Alameda County (Calif.) Superior Court here came in response to a suit filed by Berkeley, Calif.-based Abacus, charging BrainPower with breach of contract for offering its own statistics program, Statalyzer, as a replacement for StatView 512+. Last October, BrainPower sent a letter to registered owners of StatView 512+ offering the new product, which is expected to ship by mid-February. At the time, both companies were under a five-year marketing agreement due to expire this April.

"BrainPower was supposed to be aggressively selling our products," said Daniel Feldman, president of Abacus. Abacus responded by terminating the marketing agreement on Dec. 15, 1989, then seeking the restraining order when BrainPower continued to sell the products.

Charging that StatView 512+ sales had "dropped near zero," BrainPower President Sherwin Steffin denied breaching the contract. The court scheduled another hearing in the case for Jan. 16.

Falcon adopts Mitek as supplier of Tempest Macs

Landover, Md. — Falcon Microsystems, the leading Mac reseller in the federal government market, last month announced that it is now offering Macs and peripherals modified by San Diego-based Mitek Systems Inc. to meet the government's Tempest hardware security standard. Falcon, based here, will offer Mitek versions of the Mac IIx and printers from QMS Inc. and Hewlett-Packard Co. In an unrelated announcement, Falcon also said that Tom Ellis, its president and chief operating officer, has resigned. Founder and CEO Dendy Young will assume the title of president.

Apple looks better in the long view, according to Forbes

New York — As demonstrated last month, Wall Street confidence can be easily shaken. But over the long term, companies out of favor with financial analysts often take on a brighter luster. That at least is the case with Apple. Last month, Wall Street gave the company's stock a beating. Last week, Forbes magazine ranked Apple as No. 10 in profitability, based on return on equity, out of 1,150 companies. The magazine also included Apple in its short list of companies "best prepared for the coming decade."

In its "Annual Report on American Industry," Forbes noted that Apple earned an enviable 36.6 percent return on equity averaged over 10 years, placing it first in the magazine's computers and communications category, while sales grew 38.4 percent and earnings per share rose 37.3 percent per year on average. Apple was the only computer and communications company with a debt-to-capital ratio of zero.

Forbes rates Apple tops in profitability

Among computer and communications companies that sell hardware

		PROFITABILITY		GROWTH			
		Return on equity		Sales		Earnings per share	
Rank[1]	Company	10-year average	Lastest 12 months	10-year average	Lastest 12 months	10-year average	Lastest 12 months
1	Apple	36.6%	43.2%	38.4%	29.8%	37.3%	14.6%
3	Cray Research	28.9%	17.5%	39.5%	33.3%	39.4%	23.5%
9	IBM	20.2%	14.0%	11.7%	9.3%	6.8%	7.2%
19	DEC	14.9%	12.6%	22.5%	8.8%	15.8%	-17.1%
50	Compaq[2]	42.0%	38.7%	70.9%	50.6%	91.5%	53.5%

[1]By return on equity averaged over 10-year period. [2]Averaged over five-year period.

Archive, Cipher buyout battle heats up

Costa Mesa, Calif. — Archive Corp. last week pursued its bid for control of Cipher Data Products Inc. amid a welter of charges and counter-charges between the rival makers of tape backup systems (see MacWEEK, Jan. 9). Early in the week Cipher indicated a willingness to discuss a possible negotiated buyout by Archive at $8 per share, but negotiations broke off shortly afterward. Archive then reiterated its $7.50-per-share offer, saying that it was "unwilling to change the terms ... without the benefits of serious negotiations."

Meanwhile, CAC Corp., the Archive subsidiary making the offer, filed suit in federal court charging that Cipher's advice that shareholders reject the offer was "false, misleading and manipulative." □

E-mail

From previous page

a full-speed-ahead marketing approach," said David Atlas, senior analyst at International Data Corp., a market research company in Framingham, Mass.

But competition among the three leaders is stiff. During the past 10 months, the other two also have shipped major updates offering the promise of "enterprisewide" E-mail, with gateways to public and private mail carriers as well as more-advanced features for filing, sorting and addressing.

Microsoft made its foray with Mail 2.0, which shipped in early October. "Version 2.0 is very well-done, but was too long in coming," Arnum said. "Microsoft froze the market waiting for its new version. Now it has some catching up to do."

CE Software, last of the three to enter the E-mail market in 1988, was first to the punch in 1989 with Version 2.0.

"CE Software wasn't even on the list 18 months ago," Arnum said. "It broke in as the third alternative and did extremely well."

"Any E-mail package worth its salt will go after enterprisewide sales," Atlas said.

But despite a slew of announced gateways, truly simple enterprisewide connectivity is at least two years away, said Michael Howard, vice president of Infonetics, a Santa Clara, Calif., market research company. Of the three leaders, only QuickMail has gateways available.

According to an independent MacWEEK study conducted last summer, 37 percent of 2,000 MacWEEK subscribers said they were considering the purchase of E-mail packages in the next 12 months. Of those, 38 percent were considering Microsoft Mail, 31 percent were considering QuickMail, and 8 percent were considering InBox.

"There's a lot of growth ahead for E-mail," Atlas said. "Vendors really want to grab up some of that market share and create loyalty to their product before a person learns [a competing program's] keystrokes."

Tough as the current competition is, entrants in the mail race may yet face an even bigger challenge: Apple. According to sources within the company, Apple has developed its own mail system, called AppleMail. Last month's announcement that a file sharing facility will be incorporated into System 7.0 has revived speculation that mail capabilities also may eventually be built into the System or into AppleShare. □

Discovery

From previous page

"The deal was never consummated, and [Discovery] made some outlandish offers that it could not uphold," said David Cole, president of Studiotronics, which eventually brought out the system itself under the Colorset name.

Discovery had a reputation for not distributing royalties to its developers, sources said. One former employee said that vendors have not been paid for more than nine months.

George Geary, former production manager at Discovery, said a turning point for the company was its failure to bring to market an Apple IIGS version of its popular game Sword of Sodan. At the same time, Ross was busily rewriting the source code for Chroma-32.

"Rick was so involved in programming that administration fell apart," Geary said. "We had no new releases of anything, which meant no excitement in the marketplace."

Mike Smith, former product manager of Chroma-32 and co-owner with Geary of Aztec Associates in Baltimore, described Ross as a "high-spirited entrepreneur." "He was a brilliant programmer, but not a good administrator," he said.

Studiotronics announced that owners of beta versions of Chroma-32 can purchase Colorset for $199.50, half its list price, in exchange for their original Chroma-32 program disks and sales receipt.

Studiotronics Inc. is located at Lakeview 436 Office Park, Building 2, 1031 S. Semoran Blvd., Winter Park, Fla. 32792; (800) 780-3825. □

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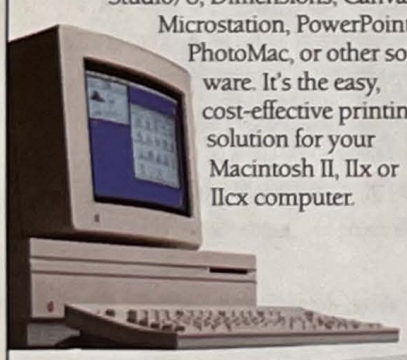

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ELECTRONIC STILL PHOTOGRAPHY

MarketWEEK

STOCKWATCH

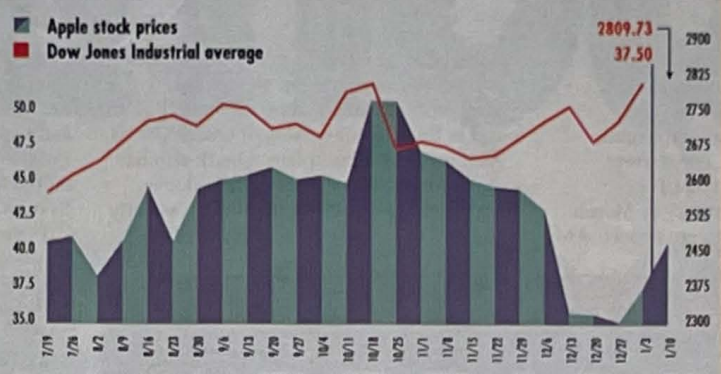
Short-lived rally fizzles for high-technology stocks

Technology stocks fell during the week ended Jan. 10, as investors grabbed profits following the previous week's bidding spurt.

Ashton-Tate Corp. was the biggest loser in MacWEEK's portfolio, plunging 12.75 percent to $11.13 a share. Other casualties included Sun Microsystems Inc., falling 9.03 percent; Businessland Inc., dropping 4.62 percent; and Apple, down 4 percent.

Apple's drop comes despite a 2.5 million share buyback program, which it initiated to take advantage of its low stock price. Even so, Apple stock closed $3.50 a share above its 12-month low of $32.50 reached last month.

Adobe Systems Inc. bucked the downward trend, however, gaining 3.53 percent, or $22 a share. The company had predicted 30 percent to 40 percent revenue growth in 1990 from its applications products and PostScript royalties.



Mac-related stocks

	CLOSING 1/3/90	CLOSING 1/10/90	PERCENT CHANGE	P/E RATIO	ANNUAL HIGH	ANNUAL LOW
MAC-RELATED COMPANIES						
Adobe Systems Inc.	21.25	22.00	3.53	16	30.00	14.00
Aldus Corp.	16.00	16.25	1.56	14	24.50	12.25
Apple	**37.50**	**36.00**	**-4.00**	**10**	**50.38**	**32.50**
Ashton-Tate Corp.	12.75	11.13	-12.75	-21	24.00	8.75
Businessland Inc.	8.13	7.75	-4.62	8	15.25	7.75
Microsoft Corp.	89.25	88.25	-1.12	27	89.25	45.75
Motorola Corp.	62.50	61.25	-2.00	16	62.50	39.50
Seagate Technology	15.88	15.63	-1.57	11	16.13	8.50
3Com Corp.	13.38	13.00	-2.80	15	28.75	10.00
INDUSTRY INDICATORS						
Digital Equipment Corp.	85.88	87.50	1.89	11	122.38	79.75
IBM	98.88	99.00	.13	11	130.88	93.38
Sun Microsystems Inc.	18.00	16.38	-9.03	29	23.00	13.00

Compiled by Nordby International Inc., Boulder Creek, Calo.

MARKETWATCH

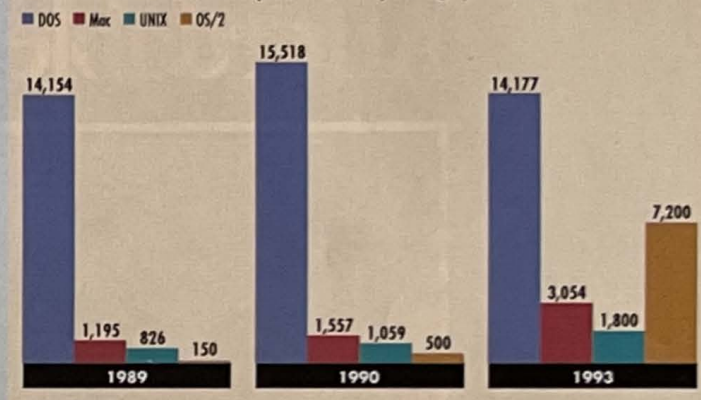
Mac operating system predicted to grab larger share of market

The Mac operating system will take a larger share of the market for microcomputer operating systems, growing from 7 percent in 1989 to 12 percent in 1993, according to Dataquest of San Jose, Calif.

Although sales of the Mac OS are expected to increase faster than sales of DOS or Unix, OS/2 will increase at the fastest rate — with sales more than double Mac sales in 1993.

Dataquest predicts DOS sales will be about the same in 1993 as they were in 1989, but that they will make up only 54 percent of sales of all operating systems in 1993, down from 87 percent in 1989. — *By Griffin Dix*

Estimated worldwide unit shipments of PC operating systems (in thousands)



Source: Dataquest

MacWEEK
New Mechanical Specifications.

Effective with the March 6, 1990 issue of MacWEEK, vertical trim dimension will downsize by 7/16''. The vertical trim size changes from 13-15/16'' to 13-1/2''. The width of the publication remains the same. Look for the new Mechanical Specifications mailing by January 22, for all additional changes.

Publication Trim Dimensions (width x height)
10-3/4" x 13-1/2" (Live area: 10-1/4" x 13")
Tabloid Page
10" x 12-11/16"
Tabloid Page Bleed
11" x 13-3/4"
Tabloid Spread
20-3/4" x 12-11/16"
Tabloid Spread Bleed
21-3/4" x 13-3/4"
Junior Page
7-3/8" x 9-7/8"
Junior Page Bleed
7-7/8" x 10-7/16"
Junior Spread
15-5/8" x 9-7/8"
Junior Spread Bleed
15-5/8" x 10-7/16"

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DTP heavyweights square off

Very few members of the computer press community had the foresight to attend Gorbachev's visit to Lithuania last week, but as you might expect, Mac the Knife can never pass up a bone-numbing transatlantic plane trip. Once he was on the ground in Vilnius, however, the soon-to-be independent Lithuanians besieged him with important questions about desktop publishing.

Fortunately, there was good news for former Communists intent on publishing when independence comes. For starters, sources are telling the Knife that PageMaker 4.0 is slated for a February or March announcement. New features are expected to include table-of-contents generation, indexing, a spelling checker and sophisticated typographical controls comparable to those found in the current version of QuarkXPress.

As if privy to Aldus' plans, Quark also has an announcement up its corporate sleeve. Sources whisper to the Knife that by as early as the end of January Quark may be giving sneak previews of XPress 3.0, which these same sources say will be feature-loaded. Mac the Knife can only wonder where this feature war will end.

There's even something in the works for those who require an even higher-powered solution but still don't want to leave the Macintosh. The Knife has heard that Interleaf is planning a version of Technical Publishing Software (TPS) that will run on the anticipated Mac IIxi platform under System 7.0. Sources tell him that System 7.0's virtual-memory feature is what makes Interleaf on the Macintosh possible, while the raw speed potential of the IIxi makes it all usable.

Later, kid. The HyperCard 2.0 project appears to be lumbering along at its own slow pace. True to schedule, it is not yet in alpha testing. Instead, the marketing forces are still requesting features, which the developers generally seem willing to include, assuming the schedule isn't thrown too far off. Color, for example, is one feature that users continue to request, and although the decision has not yet been finalized, it appears that Apple may at least throw them a bone. Marketing research shows that when people request color, what they really want is the ability to show color slides (in PICT format) for presentations. So if color is implemented, it will probably have no more functionality than is currently available with some external commands.

Developers complain. Telecommunications trivia buffs report that one of the most active conferences on MacNet is the Blyth Software developers' forum for Omnis, and a quick examination of recent postings might explain why. Developers are up in arms over some recent Blyth policy decisions regarding the Omnis Integrator, which is essentially a compiler that allows developers to create double-clickable runtime applications. The complaints mainly center around the $3,000 that Blyth is demanding for a three-year license. To rub salt in the wound, Blyth has declared Omnis 5 a new product, not an update, so developers who shelled out bucks as recently as six months ago are offered no upgrade break. Developers love the product but hate the policies.

The crystal Mac. In spite of a string of stunning new products during the last couple of months, sometimes Mac the Knife gets bored with elephantine portables and ever-faster '030s. The cure for this malaise is a quick peek into the not-so-distant future to see what Mac-ing will be like in 1991. On the drawing boards right now, for example, is one of the first 68040-based Macs, which the Knife predicts could be available in a short 12 to 18 months.

Since code names are a fool's game in this era of iron-fisted Apple security, the Knife declines to reveal the current moniker of this planned Mac, but here are some details of the hardware: Horsepower will be produced at the rate of 25 MHz, while on-board color circuitry will drive a 640-by-480-pixel display in 24-bit mode. Ethernet with built-in direct memory access will also be included, along with three slots.

Apple also is looking into producing displays that will feature 100-dpi resolution. This should result in smooth graphics at a low bits-per-pixel ratio similar to that found today on the NeXT workstation. □

Input tips, output MacWEEK mugs. Call the Knife at (415) 243-3500 or MCI (MactheKnife.) It's that simple.

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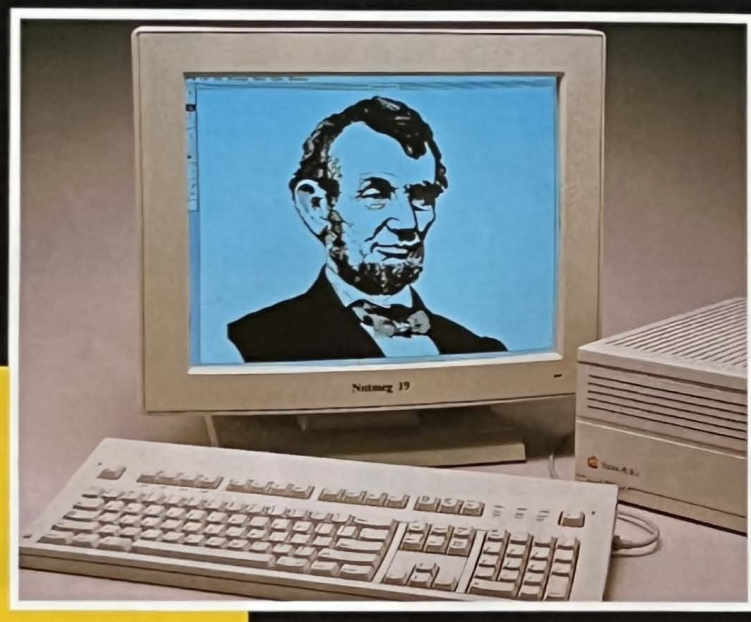

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Apple Portrait Display		✔	✔				
Apple Two-Page Monitor		✔	✔				
Apple 13" Color Monitor			✔	✔	✔	✔	✔
Trinitron® 19" Color Monitor			✔	✔	✔	✔	✔
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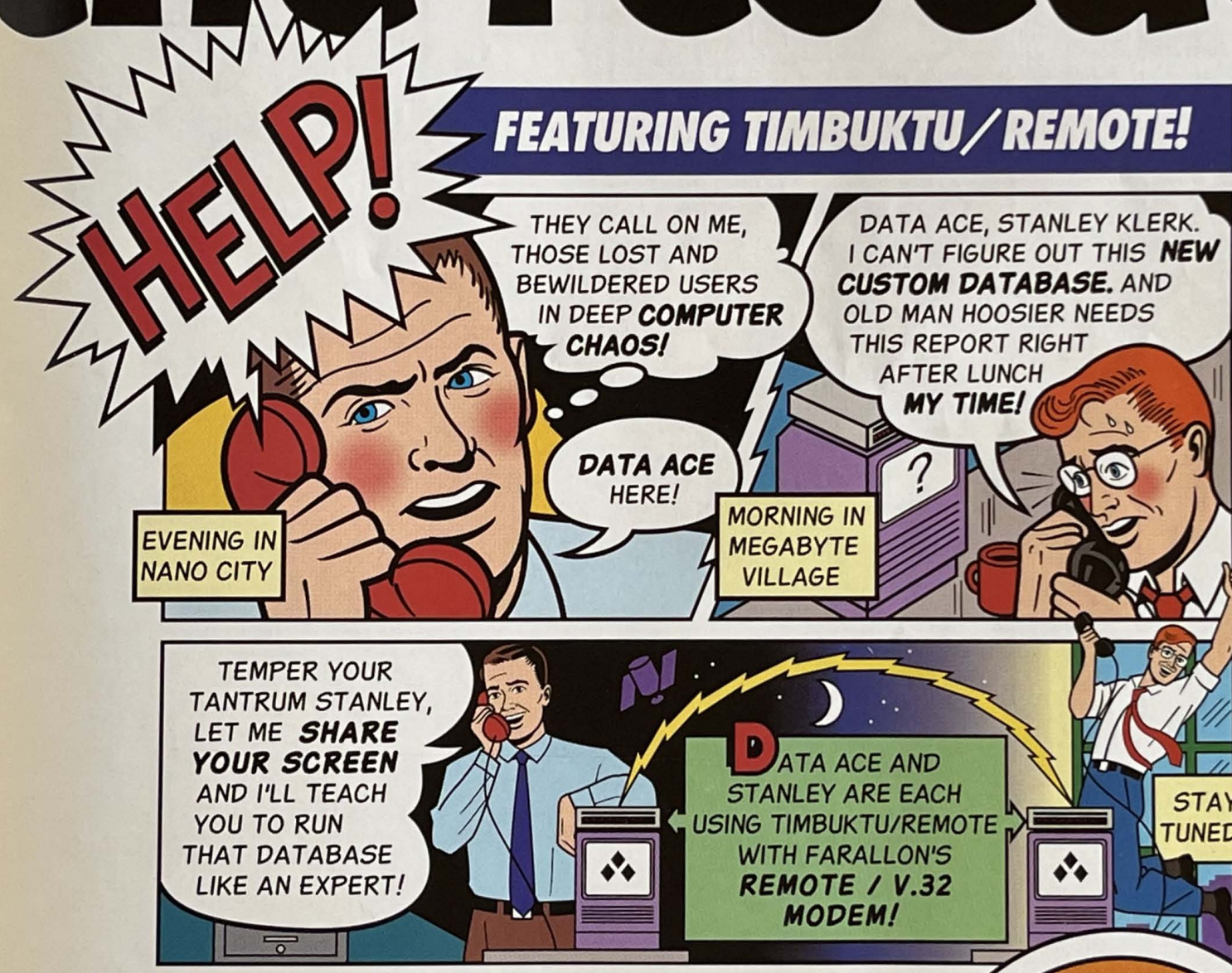
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One copy of Timbuktu/Remote and a modem are required at each location. A 9600 bps full duplex V.32 modem is recommended. Timbuktu is a trademark of Farallon Computing. All trademarks are property of their respective holders.

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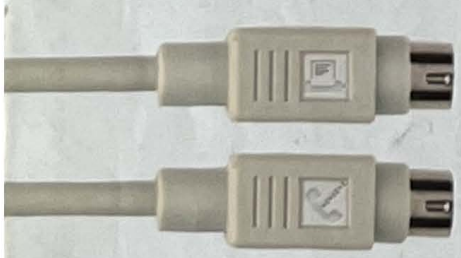
Network Productivity Is No Longer An Ether/Or Proposition.

If you have EtherTalk™ in your office, you'll appreciate EtherGate™ – the first truly universal productivity solution for EtherTalk.™ You no longer need one box to serve as a gateway, another to share serial devices and a third to connect to remote networks.



EtherGate does it all. Now you can connect an EtherTalk LAN and two LocalTalk LANs to create a fully-functional internet. Link an EtherTalk/LocalTalk internet to a serial port, so workstations on either side can access a printer, plotter or just about any other serial device. Or use the serial port and a modem to connect to a remote EtherTalk or LocalTalk internet. You can even dial in to your internet through EtherGate from a remote Mac or PC and a modem. EtherGate gives you complete access control and security features, too. Network productivity is no longer an Ether/or proposition. If you have EtherTalk, you need EtherGate. For more information call Shiva at **1-800-458-3550.**

EtherGate™
by Shiva

We're Putting Networks To Work®

Shiva Corporation, 155 Second St., Cambridge, MA 02141

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